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# SUPPLEMENT TO THE CHEMIST & DRUGGIST

For the ADVERTISEMENT of

Businesses for Disposal, Employers Wanting Assistants, Assistants Wanting Situations, Partnerships, Premises to Let, Sales by Auction, &c.,

AND

EXCHANGE COLUMN FOR DISPOSAL OF SURPLUS STOCK, ETC.

Advertisements for this Supplement must be prepaid, and can be received at the Office, 42 Cannon Street, until 5 p.m. on Thursday afternoon, or by first post on Friday morning of each week.

Remittances payable to EDWARD HALSE, crossed MARTIN & CO. Stamps are taken in payment.

**TERMS**—Businesses for Disposal, Employers wanting Assistants, Partnerships, Businesses to Let, Sales by Auction, 5 lines (fifty words) and under, 3s. 6d.

Assistants wanting Situations, 12 words for 1s.; every additional 3, 4, or 6 words, 6d.

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**MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.,**  
CHEMISTS' TRANSFER AGENTS,

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THE BRITISH AND COLONIAL PHARMACEUTICAL AGENCY FOR THE SALE AND TRANSFER OF CHEMISTS' BUSINESSES, the Negotiation of Partnerships, &c., Investigations, Valuations, Insurances, Accountancy, Recovery of Debts, Inquiries, Locum Tenens, and Assistants. Prospectus, with terms, free by post or on application. Address, the Secretary, 27 Margaret Street, Cavendish Square, London, W.

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3s. 6d. for fifty words; 6d. for every 10 words beyond.

TO BE SOLD BY AUCTION, BY

**MR. THOMAS WHITEHEAD**, at the Law Association Rooms, 14 Cook Street, Liverpool, on Friday, September 10, 1886, at 3 o'clock, the Chemist's Shop and Dwelling-house, No. 79 Spencer Street, and Goodwill of old-established Business, with good retail trade and excellent prescribing and dispensing nucleus (fixtures, fittings, and stock to be taken at a valuation). Decease of proprietor the cause of selling. A portion of the purchase money may remain on mortgage at 4½ per cent. Inspection and offers invited.

Apply for conditions and particulars to Messrs. Thornely & Cameron, Solicitors, 5 Fenwick Street, Liverpool.

### TO LET.

**TO LET**.—2 Meadow Road, Leeds, corner shop, good position, populous neighbourhood; excellent house, and warehouse attached; old-established Chemist and Druggist business; rent low. Apply, W. Scott, 44 Malvern Road, Beeston Hill, Leeds.

### PARTNERSHIP.

**PARTNERSHIP**.—Young Gentleman, aged 27, wishes to invest £800 in a sound business, where he can take an active part in the management; no objection to travel; can manage wholesale and retail department; 12 years' experience. Particulars in confidence. "Bescot," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

### BUSINESS WANTED.

**A GENUINE** Dispensing and Prescribing Business in Eastern or Southern Counties; about £400 cash, bearing investigation; one that has been neglected or badly managed could be treated with; state returns, net profits, and necessary particulars. "Alpha," South Heigham Pharmacy, Rupert Street, Norwich.

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**IMMEDIATE DISPOSAL**, an Old-established Drug, Stationery, and Printing Business at Selby. Apply, T. Spivey, Chemist, Howden; or T. Parker, Chemist, York.

**ATTENTION**.—Business for Sale, North of Ireland, chiefly Compounding and Retail; returns almost £3,000; profits at least £600, could easily be made £1,000; rent low, best position; will sell at once for actual value of stock and cost of fittings, about £1,000; offer open one week only. Address, "Fortuna," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.



**OLD-ESTABLISHED** Family and Dispensing Business, with profitable agency; full prices; returns £1,100; will bear thorough investigation; satisfactory reasons for leaving. For particulars apply to "Junior," 137 Southgate Road, London.

**RETAIL**, Prescribing, and Dispensing Chemist's and Tea Dealer's Business (established 1797); present hands 24 years; in the busiest market town in Cornwall; good shop and premises, long lease; proprietor leaving England on account of health; incoming low, to effect speedy sale; no agents. Address, J. Sambell, Chemist, Redruth.

**A GOOD-CLASS** Retail, Dispensing, and Agricultural Business, with Gilbey's sole agency attached; best position in one of the best market and manufacturing towns in the North of England; splendid opportunity for intelligent business man with capital; satisfactory reasons for disposal. Apply, "Pharmacist," care of Wright, Layman & Umney, Southwark Street, London.

**KENT**.—For immediate Disposal, first-class Retail and Dispensing Business; returns nearly £1,000 yearly; profits above the average; large house, commanding position; price for business, £800—£500 on entry, remainder may remain, to be paid by instalments if wished. Full particulars on application at Messrs. Orridge & Co.'s Offices, 32 Ludgate Hill, London, E.C.

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**SOUTH WALES**.—Chemist's Business in large manufacturing and seaport town; price £250, £100 cash, remainder by easy instalments; grand opportunity for beginner; Welsh not essential; good house; corner shop; principal thoroughfare; strict investigation invited. Apply, "Cymro," care of Messrs. Barclay & Sons, London.

**EXCHANGE** or Sale, low incoming, Chemist's Business in rapidly improving country district; large good house, adjoining large field; orchard well stocked; garden, greenhouse, good stables, which let readily if desired; rent very low; intending purchasers only treated with. E. X., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

## EMPLOYERS WANTING ASSISTANTS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

**A N ASSISTANT**, about 23 years of age; Minor; must be a good hand at general counter business, and dressing window. D. P., 244 Westminster Bridge Road. Indoor. Salary £60 per annum. Apply personally only.

**WANTED**, a trustworthy, energetic Assistant, to work up a business; qualification no object; indoor; salary and commission. Apply, B. C., Hearon & Co., 5 Coleman Street, E.C.

**LABORATORY MAN** required by a firm of Wholesale Druggists; must have had good experience in the preparation of tinctures, &c. Apply, by letter only, stating salary, experience, &c., to "Laboratory," 44 Avenue Road, Lower Clapton, E.

**CAPE**.—Wanted, a "Minor" Man, aged about 25, as Assistant at the Cape; salary £80, indoor; passage paid out. Candidates, who must hold the Minor qualification and undeniable references, apply, sending photograph, to Messrs. Evans, Lescher & Webb, 60 Bartholomew Close.

**A SSISTANT**, end of September, for superior pushing Retail, with Dispensing, Prescribing, and Tooth Extracting; over 25 years of age; outdoor; no Sunday work; salary £80. Apply, with references, photo, &c., to Mr. W. D. Gibb, Chemist, Winchester.

**A GOOD JUNIOR**; age not under 20; one who is wishing to work up for examinations will find this a good opportunity, as time will be allowed for study. Address, enclosing carte (which will be returned), stating age, height, salary required, with references, to W. Jacobs, Medical Hall, Guildford, Surrey.

**WANTED**, Junior Assistant in a good country business. Apply, stating age, height, salary required, photo if possible, V. Meacham, Ledbury.

## ASSISTANTS WANTING SITUATIONS.

1s. for twelve words; 6d. for every six words beyond.

**A S ASSISTANT** or Manager of Branch; in or near Liverpool or Manchester; disengaged. 87 South Street, Longsight, Manchester.

**M R. S. SMITH**, Chemist, 76 Devonshire Street, Bridge-water, takes Confidential Charge during changes, absence, or illness.

**A SSISTANT** wishes situation as Dispenser to Surgeon, where he might attend medical classes. S. R. Z., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**OUTDOOR ASSISTANT** or Manager of Branch; 10 years' London and provincial experience; knowledge of Dentistry; aged 26; disengaged end of September; first-class references. W. H. C., 53 Victoria Street, Douglas, Isle of Man.

**A GENCY** to travel in Scotland for Wholesale House wanted by advertiser, who has occasion to travel on other business, and time not fully occupied; knowledge of Drug trade. Apply, W. M. Morgan, Bernard Street, Leith.

**WHOLESALE**.—A Pharmaceutical Chemist, speaking French and German and writing shorthand, and with 6 years' wholesale experience, seeks an engagement; first-class references. Address, "Englishman," care of J. Wheeler, 56 Casella Road, New Cross, S.E.

**A S ASSISTANT**; time to attend lectures; 7 years' experience; aged 22. R. W., 7 Coburg Street, Plymouth.

**A S ASSISTANT** (Wholesale) in Laboratory, Office, or Warehouse; aged 22; good references, &c. "Exon," Taddipport, Great Torrington, Devon.

**HOME OR COLONIAL**.—Wanted, occupation by a thorough enterprising active business man of good address, having Chemist and Veterinary qualifications; large experience and thorough knowledge of the manufacture of important goods used by Sheep Farmers, Agriculturists, and others. 29/35, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**A S ASSISTANT**, with view to Partnership or Succession; aged 23; height 5 ft. 10 in.; 8 years' experience; North of England preferred. A. Milne, 55 Melville Lane, Montrose, N.B.

## APPRENTICESHIPS.

**WANTED**, a well-educated Youth as an Apprentice in a Mixed Country business, or one who has served part of his time. H. Payne, Chemist, Market Rasen, Lincolnshire.

**NICE, FRANCE**.—Nicholls & Passeron, English and French Chemists, have a vacancy for an educated youth as Apprentice; comfortable home, time for study; an excellent opportunity afforded for acquiring both English and French Pharmacy. Apply to Mr. Allen, Pharmaceutical Chemist, Kilburn.

**A PPRENTICE**.—Wanted immediately, a well-educated Youth as an Apprentice to a Chemist and Druggist; terms, a moderate premium required. Apply to T. O. Hawthorne, Chemist, Stafford.



**APPRENTICE.**—Chave & Jackson, Pharmaceutical Chemists, Hereford, have a vacancy for a youth, aged about 16, who has passed the Preliminary. Exceptional opportunities offered for acquiring a thorough knowledge of the business.

**WANTED IMMEDIATELY**, in a good Retail and Dispensing Business, a gentlemanly, well-educated Youth as an Apprentice. Apply, G. Hewitt, Medical Hall, Kidderminster.

## MISCELLANEOUS.

**E. NATALI**, having purchased a manufacturer's stock of Glass Cases, Drawers, Fixtures, &c., is prepared to offer them at a great sacrifice, to make room for other goods. E. Natali, 207 Old Street, London, E.C.

**BARGAIN.**—New Essence Lemon, one 10-lb. tin, at 4s. 6d. lb.; also 28-lb. tin Citrate Magnesia, 8d. per lb.; both packages free; or surplus stock patents taken in part or whole exchange. Address, Edward Banner, 71 Byrom Street, Liverpool.

**FOR SALE.**—No reasonable offer refused. — Labeled Drawers with glass handles, Shop Rounds, Sundry Fittings, Handsome Show Jars, &c., all recently removed from a Chemist's shop; vendor invites early inspection. Apply, L. D. S., 1 Devonshire Terrace, Sandgate, Kent.

## NOTICE.

**SAMUEL PERKS** (of the firm of Perks & Llewellyn, Lavender Distillers and Chemists, Hitchin) begs to inform the Trade that he has not any business connection with C. E. Perks, Perfumer, &c., London.

## PRELIMINARY AND MINOR.

**ALL STUDENTS** who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 38 Pupils passed the last Examinations.

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### Proprietary Articles.

Six dozen Gordon's extract; what offers? 28/11. Seventy 6d. Judson's dyes; 2, 3s. 6d. Rowlands' macassar; 2, 2s. Dean's crinoline; 2, 1s. 1½d. Henry's nervine; 1, 1s. 1½d. Simpson's anti-bilious pills; 2, 2s. 9d. Reynolds' gout specific; 7, 2s. 9d. Jenner's liver mixture; 7, 1s., 2l. 6d. Sandford's rat poison; all clean; 1, 4s. 6d. Batchelor's hair dye; 1, 1s. 1½d. Eyre's cough pills; 2, 2s. 9d. Parr's pills; 1, 2s. 9d. King's pills; soiled; what offers? 29/2.

### Educational.

Letts' 3-guinea "Atlas," two volumes, calf, new, for 2l., or exchange for good half-plate bellows camera and slides. Gradidge, Chemist, Andover.

Wills' "Materia Medica," 10s. 6d., nearly new, 7th edition, what offers? Carruthers, St. John's, Bedford.

£1 1s. Tully's "Materia Medica Cabinet," scarcely used, for 12s. 6d., or exchange; over 200 specimens. A. G. S., 14 Queen Street, Watford, Herts.

Books, secondhand.—Smith's "Principia Latina," 1s. 9d.; "Chemists' Register," 1885, 3s.; Balfour's "Botany," 5s.; Ure's "Dictionary," four volumes, new, what offers? Large stock Latin, French, English school books cheap; see last week. Walker, Seacombe.

### Literature.

Chemist and Druggist, monthly 8d., weekly 2d.; Journals, 2d., from 1860; Diary, 2s.; all post free. Williams, Chemist, Coleford, Gloucestershire.

Pharmaceutical Journal, posted same day, for 10s. year, or would exchange for Chemist and Druggist. "Associate," 178 High Street, Lewes.

### Formulæ.

Formula similar to Rooke's solar elixir, price 2s. 6d. Stepbenson, Chemist, 84 Barkerend Road, Bradford, Yorks.

Set of 12 recipes for gonorrhœa, gleet, syphilis, secondaries, &c., with full details for distinguishing the various forms, with instructions for use; price 3s. 6d. per set. A. Johnson, 64 Furness Hill, Sheffield.

## Shop Fittings.

Plate glass counter cases, A 3, 2 ft. long, 30s.; 2 ft. 6 in. long, 35s.; 3 ft. long, 40s.; A 4, 3 ft. long, 5l.; A 8, 6 ft. long, 5l. 10s.; tooth brush cases: A 9, 30s.; A 10, 50s.; A 10, to open at back, 30s.; A 15, 2 ft. 6 in. long, 4 ft. long, 75s.; A 16, 3 ft. long, 45s.; 4 ft. 6 in. long, 85s.; 5 ft. long, 10 in. wide, 70s.; 6 ft. long, 5l.; A 17, 4 ft. long, 75s.; A 18, 5 ft. long, 95s.; 6 ft. long, 5l. 10s.; desks and cases as Fig. A 31, 60s.; sponge cases, A 41, 60s.; A 43, 95s.; dispensing screens, with marble centre and cases at each side, silvered glass at back of slab, 6 ft. long, 6l. 10s.; other sizes, larger dispensing screens, A 54, 3 ft. long, 3 ft. 6 in. long, 4 ft. long; A 55, 5 ft. long, 6 ft. long. E. Natali, 207 Old Street, London, E.C.

Second-hand Fittings.—Spanish mahogany counter, 19 ft., 16l.; 9-ft. dispensing ditto and screen, 2 ft. 5 in. high, and tablet, 12l.; mahogany-fronted dovetailed drug-drawers cover-boards, grained lockers; 14 ft. 5 in., 2 nests, 112, 10l.; mahogany wall-case, sheet-glass sashes, fixed shelving, and grained cupboard under, 12 ft. 8 in. long, 8 ft. 10 in. high, 9l.; counter-cases, as Maw's A 4—48 in. long, 27 in. high, shelves, tablet, carving, 8l.; plate-glass case, ebonised, 73 in. by 22½, 4l. 10s.; counter-case, sloping flaps and tablet, 82 in. by 17 in., 2l. 10s.; upright Spanish mahogany counter-case, 78 in. by 33 in., 5l. 10s.; desk with brass rail, 30 in., 35s.; 2 mahogany chairs, carved backs, 30s. Hawke & Son, Wild Court, Great Wild Street, London.

Plate glass wall case, A 88, 7 ft. 6 in. long, 22l.; plate glass fronted counters, mahogany counters, wall fixture, mahogany fronted drawers, with lockers under, shelving and cornice over, 12 ft. long, 8l. 10s.; 4 lb. pink ointment jars, dome covered, 3s. 9d. each, labelled; shop rounds, 7s. 6d. per dozen; 4 ft. nest counter drawers, 13, for paper, labels, till, &c., 40s.; carboys, cut stoppers, 12, 14, and 16 gallon; soda water stand, A 57, 45s.; mahogany fronted counters, very elaborate, 9 ft. 6 in. long, fitted under with 36 drawers and till, 7 ft. ditto to match, with cupboards under, 3 ft. 6 in. ditto; 11 ft. wall case, 9l. 10s.; 5 ft. wall case, as A 86, but with glass cupboards under, 8l. 10s.; specie jars, Royal Arms, 80s. pair; also a quantity of other fittings, &c. E. Natali, 207 Old Street, London E.C.

## Miscellaneous.

3l. 3s. watch, as new, 25s. Edwards, 22 Promenade Villas, Cheltenham.

2 and 4 gallon carboys, exchange for tooth instruments. Pease, Saltney, Chester.

Glass Bottles.—About 8 gross pale-green tinted 3-oz. round pomades, screw nickel capped, 12s. per gross; 4 gross 14-oz. round-shouldered vials, white, best quality; several other lines equally cheap. Hearn, Riddell, Kingsland Road, London.

Pair 4-lb. French counter scales, 15s. 6d.; 10-lb. ditto, 13s.; 4-lb. marble-top ditto, 17s.; 4-oz. verified measures, 10s. doz.; new pill machine, 16s.; No. 10 composition mortar and pestle, 7s.; 16-oz. blue plug syrup bottles, 9s. doz., 30-oz. 10s. doz.; quantity 1-lb. olive and blue camopy ointment jars, 8d. each; 2-lb. ditto, 1s. 3d. each; 3-lb. ditto, 1s. 9d. each; 4-lb. ditto, 2s. 3d. each; quantity new stoppered shop bottles, 8s. 6d. doz.; 4 engraved acid bottles, 4s.; several curved counter glass cases, from 1l. 10s.; various show globes and specie jars, glass, sponge, &c.; jars with crown-shape lids. Simecock, Druggists' Sundryman, Guildford Street, Leeds.

Cheap lines in druggists' sundries. Bent feeders, black fittings, 27s. gross; screw ditto, 33s. gross; best white teats, 4s. gross; black teats, 5s. gross; black tubing, 7s. 1b.; 1 and 2 drachm flint vials, 2s. 8d. gross; 1-oz. ditto, 3s. 3d. gross; 2-oz. ditto, 4s. 6d. gross; 3-oz. and 4-oz. dispensing bottles, 6s. gross; 6-oz. and 8-oz. ditto, 7s. gross; 8-oz. salines, 9s. gross; glass plug salines, 13s. 6d. gross; 2-oz. nickel screw pomades, 17s. gross; 1-oz. glass opal covered pots, 16s. gross; soft capsules, 7/6 1,000; 8-in. filtering paper, 8d. 100; boat feeders, 3/6 doz.; glass nipple shells, 1/10 doz.; drachm pink cuts, 4d. gross; sick feeder cups, 4/6 doz.; 2-oz. deep nested willows, 2/8 gross; Higginson's enemas, 2/4 doz.; Ingram's seamless enemas, 27/6 doz.; 30-oz. glass capped oil bottles, 22/ doz.; white demy, 4/ ream; blue demy, 6/6 ream; best vial corks, 6d. gross. Simecock, Druggists' Sundryman, Guildford Street, Leeds.

## WANTED.

Lynch's double-action tincture press. Address, County Drug Co., Plymouth.

Twenty firkins soft soap, good; must be cheap. Morgan, Chemist, Hereford.

Wall-case, similar to Lynch's fig. 38, glass ends, about 6 ft. long. H., 16 Manor Street, Stonehouse, Plymouth.

Sponge-case, as Maw's A 43; good condition. Tether, 39 Francis Place, Friar Street, Blackfriars.

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Very respectfully,

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Is Specially adapted for the Dyspeptic and Bilious who cannot take ordinary Coffee.

This Beverage combines the Medicinal virtues of Taraxacum with the refreshing properties of Coffee

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*Prepared from the finest Coffee, with a suitable proportion of Chicory, which is generally preferred.*

The great and increasing demand for this article warrants the assertion that it is the

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# Extract. Cinchonæ Liq.

(De Vry.)



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The title, *EXTRACTUM CINCHONÆ LIQUIDUM (DE VRY)*, being registered as a Trade Mark, we shall not hesitate to take immediate proceedings against any person infringing the same, and Pharmacists are respectfully cautioned against purchasing the Extract in other than original bottles, of which the annexed is a *facsimile*.

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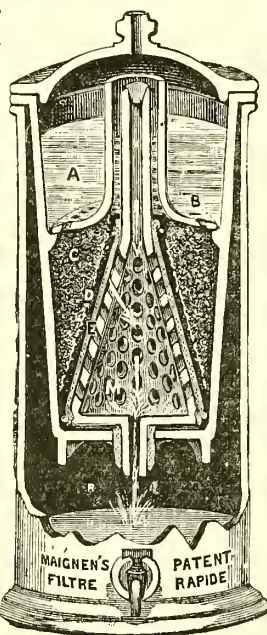
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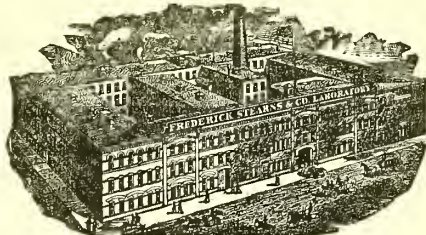
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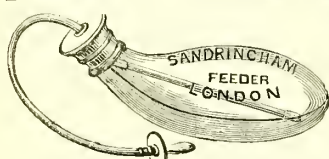
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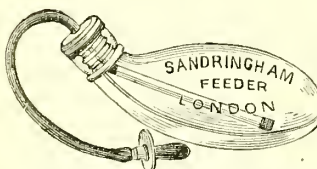
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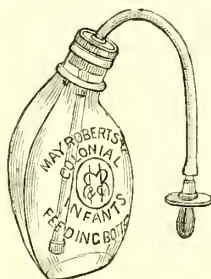
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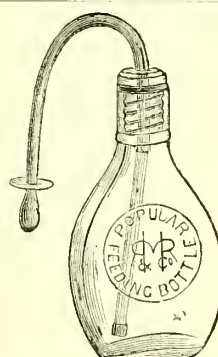
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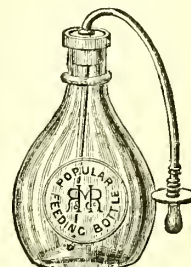
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Spare Bottles " "	1 2

#### Popular (1s.) — WHITE, Screw Glass Stoppers—

With White Fittings, each in box, two brushes . . . per doz.	s. d. 4 6
With Black Fittings, each in box, two brushes . . . per doz.	5 0
Spare White Fittings " "	2 6
Spare Black Fittings " "	3 0
Spare Bottles " "	1 9

#### Colonial (1s.) — WHITE, Earthenware Tops—

With White Fittings, each in box, two brushes . . . per doz.	s. d. 4 6
With Black Fittings, each in box, two brushes . . . per doz.	5 0
Spare White Fittings " "	2 6
Spare Black Fittings " "	3 0
Spare Bottles " "	1 2

#### Colonial (1s.) — WHITE, Screw Glass Stoppers—

With White Fittings, each in box, two brushes . . . per doz.	s. d. 4 6
With Black Fittings, each in box, two brushes . . . per doz.	5 0
Spare White Fittings " "	2 6
Spare Black Fittings " "	3 0
Spare Bottles " "	1 9

Telephone Number,  
1852.

# Advertisers' & Buyers' Reference List, AND INDEX TO ADVERTISEMENTS.

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**CHEMDRUG**  
**LONDON.**

ADVERTISEMENTS APPEARING IN THIS ISSUE OF "THE CHEMIST AND DRUGGIST."

Please note that to satisfy Post Office requirements the Advertisements are paged twice—once in Arabic, once in Roman numerals.

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## CLASSIFIED LIST OF ALL ADVERTISERS

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AERATED AND MINERAL WTS AND PLANT	Aerated & Mineral Wts. & Plant.—cont.	ACETIC ACID	AGENCIES ABROAD	BANDAGES
[See SYPHONS and ESSENCES.] Aesculap Bitter Water Co (Lim.) Apollinaris (Hunyadi), Friedrichshall, and Apollinaris Barnett and Foster Bratby and Hinchliffe British Syphon Co. Bush, W. J., and Co. (Foam Producer, &c.) Chemists' Aerated Waters Association Ellis (Ruthin) Favarger, H. Gerant and Co. Guert Freres Harston & Co. Hassall and Co. (Citric Acid, Phospho)	Hooper and Co. (Brighton Seltzer) Ingram and Royle (Mineral) Jewsbury and Brown Kimmond and Co. La Bourboule Mendocroft, W. Mills and Co. (Bourne) Montserrat Lime Juice Schewpe and Co. Stevenson and Howell Taylor, F. and F. J. Tyler, Hayward, and Co. Vallet, L. (Bottles) Younger and Ridley (Temperance Wines)	Dunn and Co. Hirst, Brooke and Hirst Lindsey, O. R., and Co. ALCALOIDS Howards and Sons (Cinchona) Smith, J. and H. AMMONIA May and Baker Hirst, Brooke and Hirst APPARATUS Carter, J. H. Follows and Bate, Lim. Knowles, Thos. (Balances) Maud, W. R. (Measuring) May, Roberts (Water-bath) Morgan Crucible Co. Orme (Scientific) Pat. Plumbago Co. Co. Rothermel, Paul (Vinegar) Wolters Otto (Balances)	Cocking (Japan) Davison, A. [delphia] Eisner and Mendelson (Philadelphia) Evans, Sons and Mason (Canada) Felton (Melbourne) Fongera (New York) Hormusjee Ruttonjee (Bombay) Kemphorne (N.W. Zealand) Lennon (Port Elizabeth) MacNaughtian (New York) Mayhew, E. (West. Australia) Phillips and Co. (Bombay) Prosser, E., and Co. (Sdney) Roberts (Paris, &c.) Rocke (Melbourne) Sharland & Co. (Auckland N.Z.) Shirreffs and Co. (Allahabad) Symes and Co. (Simla)	Bailey and Son Bole Hall Mill Co. Gibbs, Cuxson, and Co. Hutchinson, A., and Co. ("Heft-Liverpool Lint Co. band") Robinson and Sons Seabury and Johnson Statham and Co. (Porous Elastic) Birkbeck Bank BATH GLOVES Pattison, G. BEDS, WATER Hooper and Co. Hutchinson, A., and Co. (Sheeting Rubber) BEEHIVE & HONEY Kemp, W., and Son



**BICARB. SODA**

Brunner, Mond and Co.  
Gaskell, Deacon and Co.  
Howards and Sons  
May and Baker

**BISMUTH PREP.**

Howards and Sons  
May and Baker

**BOOKS**

Dobell, Dr. (Rournemouth)  
James, Dr. Prosser (Guide to New B.P.)  
Smith, J. G. ("Aërd Wtrs")

**BOTTLES**

Ayrton and Saunders  
Barnett and Foster (the "Eclipse" Stonpered)  
Brathly and Hinchliffe  
Brooks, Peck (Perfumers)  
De Luca, G. V.  
Glasgow Apothecaries' Co.  
Harris and Co.  
Hearn, Riddle  
Hunt's Bottle Caps  
Isaacs, J., and Co.  
Kilner Bros.  
Poths  
Simcock, W.  
Simcock, W.  
Thompson, Millard and Co.  
Toogood (Feeding)  
Vallet

**BOXES**

Austin and Co. (Cardboard)  
Ayrton and Saunders (Willow)  
Brathly and Hinchliffe  
Estes, Turned Wood  
Metz, Paul (Pine and Willow)  
Nokes, B., and Co.  
Robinson and Sons (Cardboard)  
Rogers, J., and Co.  
Self-Opening Tin Box Co.

**BROMIDIA**

Battle and Co.

**BRUSHES**

Ashworth (Metallic)  
Dukes and Co.  
Gérard, A. (Toilet)  
Titterton & Howard

**BUTTER COLOUR**

Bush, W., Son, and Co. (Mari-goldine)  
Meyer and Henckel  
Olafeld, Pattinson and Co.

**CAMPFOL**

Howards and Sons (pathic)  
Keene and Ashwell (Homoeo-May and Baker)  
Murray, Sir James (Fluid)

**CAPSULES**

Betts and Co. (Metallic)  
Chevalier (Solubles)  
Denoual, J. (Medicinal)  
Hooper, B., and Co.

**CARMINE**

Bush, W. J., and Co.  
Seilers

**CATALOGUES**

Bourne, Johnson, and Latimer  
Newbery and Sons  
Quarterly Price Current (Maw's)

**CEMENT**

Foulkes  
Kay (Coaguline)

**CHALK PRECIP.**

Dunn and Co.  
Levermore and Co.

**CHEMICALS**

Braywell, E., and Son  
Brunner, Mond and Co. (Bicar-bonate of Soda)  
Bush, W., and Co.  
Dunn and Co.  
Gaskell, Deacon and Co. (Bi-carbonate of Soda)  
Howards and Sons (Pharma-ceutical)  
May and Baker  
Oldfield, Pattinson and Co.  
Smith, T., and H.  
Sumner, R., and Co.  
Sutton and Co. (Volumetric Analysis)  
Tytkie and King  
Walker, Troke and Co.  
Zimmermann, A. and M.

**CHLORODYNE**

Bage, T., Blyton, and Co.  
Davenport (Browne's)  
Freeman  
Trowle, A. P.

**CHLOROFORM, &c.**

Duncan, Flockhart  
Macfarlan, J. F.  
Smith, T., and H.  
Zimmermann

**COCAINE**

Howards and Sons  
McKesson and Robbins (Hydro-chlorate of)

**COCOA & CHOCOLTE**

Cadbury Bros.  
Fry (Malted)  
Richards, J. M. (DeLacore's)

**COD-LIVER OIL**

Allen and Hanburys  
Baiss Bros.  
Beesley, J. E., and Sons (Iodized)  
Carr, Graham and Co.  
Hooper, B., and Co.  
Jensen's "Iceberg Brand"  
Smith, T. J.  
Southall Bros. and Barclay (Al.)

**COFFEES**

George and Welch (Dandelion)  
Symington (Various Essences)

**COMPRESSD MEDCNS**

Drysdale and Co. (Leo's Chlor-Potash)

**CORN CURES**

Hooper, B., and Co.  
Newbery, F., and Sons

**COTTON WOOL.**

Haynes and Co.

**CRUCIBLES**

Morgan Crucible Co.  
Pat. Plumbago Co.

**DENTIFRICES**

Beddard, J.  
Jewsbury and Brown  
Martin, J. W. (Rozalium)  
Rimmel  
Sutton, O., and Co.  
Thompson and Capper  
Woods, W. (Arecia Nut)

**DENTISTRY**

Buck, F. (Lessons)  
Jones, Dr. C. H. (Mechanical)

**DISINFECTANTS**

Dinsdale, J. T. (Pam)  
Government Sanitary Co.  
Hamilton and Co. (Carbolica)  
Harrison and Co. (Hydroleine)  
National Chemical Co.  
New Carbolic Sanitary Co.  
Rimmel  
Sanitas  
Steele & Co. (Chloride of Lime)  
Vogt, G.  
Wyleys and Co. (Pure Terebene)

**DOG MEDICINES**

Spratts (Patent) ("Fibrine")

**DRUG MILLS**

Bailey & Co.  
Carter, J. H.  
Follows and Bate (Entrprs.)  
Werner and Pfeiderer

**DRUGGISTS' SUN.**

Ayrton and Saunders  
Baiss Bros.  
Bourne, Johnson  
Evans, Lescher and Webb  
Hockin, Wilson and Co.  
Lairitz (Pine Wool)  
Lynch and Co.  
Maud, W. R.  
Maw, S., Son and Thompson  
May, Roberts and Co.  
Newbery, F., and Sons  
Schutze and Co.  
Simcock, W.  
Thompson, Millard  
Toogood

**DUBBIN**

Dales, J. T.  
Jamieson and Co.

**DUTCH MEDCNS.**

Bieber, J. D.

**DYES**

Ayrton and Saunders  
Judson's (Patent Show Case)

**EAU DE COLOGNE**

Farina, J. M. (Gegentiber)

**ELECTRIC APPAR.**

Darton, F., and Co.  
Orme and Co.

**ENEMAS**

Ingram and Son  
Lynch and Co.  
Schutze and Co.

**ENGRAVERS**

Barker, W., and Son

**ESSENCES, FRUIT**

AND SOLUBLE

Brathly and Hinchliffe  
Bush, W. J., and Co.  
Fletcher, Fletcher and Steven-son  
Jackson, J., and Co.  
May and Baker  
Meadowcroft, W.  
Radlauer's Ess. of Pines  
Stevenson and Howell  
Sumner, R. and Co. (Ginger Ale)  
Sutton, Francis and Co. (Stan-dard Solutions)  
Tytkie and King (Pear and Peachapple)

**EXTRACT, MEAT**

Brand and Co.  
Burgoyne, Burbridge and Co. (Dr. Kochs)  
Coleman & Co.  
Hugo, Brown and Co.  
Liebig Co.  
Poths (Leube Rosenthal)

**ETHER**

Duncan, Flockhart and Co.  
Howards and Sons (Chloric)  
May and Baker  
Robbins

**ESSENTIAL OILS**

Bush, W., Son and Co. (Imprs.)  
Bush, W. J., Lemons, &c.)  
Clay, Dod & Co.  
Cocking (Japan Peppermint)  
Jackson, J., & Co. (Peppermint &c.)  
May and Baker  
Rocke, Tompsitt (Eucalyptus)  
Stallion and Fulton  
Stevenson and Howell  
Todd (Am. Peppermint)  
Vogt, G.

**EXTRACTS, FLUID**

Baiss Bros.  
Barber, G., and Co.  
Burgoyne, Burbridge &c.  
Fletcher, Fletcher & Stevenson  
Howards and Sons  
Stearns, F., and Co.  
Thompson, Henry Ayscough, and Son

**FACE POWDERS**

Chubb, J., and Co. (Violet)  
Foulkes

**FEEDING BOTTLS.**

Bourne, Johnson and Co.  
Hearn, Riddle and Co.  
Kilner Bros.  
Lang, J., and J.  
May, Roberts, and Co.  
Richards, Charles (The Ciner)  
Simcock, T.  
Thompson, Millard and Co.  
Toogood, W. ("The West-minster")

**FILTERING**

Doulton and Co.  
Dunlop, Mitchell and Co.  
Judson, D., and Son  
Maigren (Filtre Rapide)  
Mawson and Swan  
Schwenker, E. and Co. (Paper)  
Silicated Carb. Filtr Co.

**FOOD, INFANTS'****AND INVALIDS**

Clarke, S. (Food Warmers)  
Heaton, Squire & Francis  
Jensen (Peptone)  
Maclean's Revalenta  
Nestle, H.  
Savory and Moore (Pancreatic)  
Southall Bros. and Barclay (Prepared Malt)  
Van Abbott (Diabetic)

**FORMULÆ**

Brooks, T.

**FULLER'S EARTH**

Chubb, J., and Co.  
Hynam, J.  
Rouse and Co.

**FUNNELS**

Maud, W. R. (Self-acting)

**GINGER ALE**

Bingley, J.  
Kimmond  
Mills, R. M.  
Ross and Co.  
Schweppé (Dry)  
Sumner, R., and Co.

**GINGER - BEER**

POWDERS

Kemp and Son

**GLYCERINE**

Fink  
Price's Candle Co.

**GRANULAR PREP.**

Allen and Hanburys  
Bishop, A.  
Bush, W., and Co.  
Goodall, Backhouse and Co.  
Toilet Cream

**GRINDING MCENS**

Bracher and Co.  
Carter's Disintegrators  
Follows and Bate  
Werner and Pfeiderer

**GUMS**

Fink (Arabic, &c.)

**GUTTAPERCHA**

Duncan, Flockhart  
Stevens, P. A. (White)

**HAIR PREP.**

Ayrton and Saunders  
Bates, T. W. (Frizzetta)  
Capper, W. B. (Crinodoe)  
Cheesebrough Manfr. Co.  
James and Co. (Herbl. Pom.)  
Rimmel  
Sturrock's Oleagum

**HOMOEOPATHIC**

Bristol and W. of England  
Epps, James, and Co.  
Gilbert, W.  
Gould, E., and Son  
Keene and Ashwell  
Leath and Ross  
Thompson and Capper

**HARNESS POLISH**

Jamieson and Co.

**HERBALISTS**

Butler, McCulloch  
Potter and Clarke

**HOSPITALS**

London Homeopathic  
The London Hospital

**ICE**

Barnett and Foster

**INK**

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Antioch  
Bewley and Draper  
Duncan, Flockhart  
Jamieson and Co.

**INSECTICIDES**

For. Shapland & Co. (Fly Papers)  
Galzy, E.  
Judson and Son, Lim.  
Maw, S., Son, & Thompson (Insecticide-Vicat)  
Radlauer (Moth Paper)  
Sumner, R., and Co.  
Vogt, G.  
Woolley & Son (Dalmatian pdr)

**KETCHUP**

Tyler, P.

**LABELS**

Blake and Mackenzie  
Bowers Bros.  
Ford, Shapland and Co.  
Townsend (Exeter)

**LANOLINE**

Haller and Co.

**LARD**

Ewen, J.

**LEATHER**

Shaw, Alexander and John

**LEECHES**

Butler, McCulloch  
Fitch and Nottingham  
Potter and Clark

**LICORICE**

Craven, M. A., and Son  
Maud (Compound)

**LIME JUICE**

Feltow and Sons (Specialist)  
Montserrat (See Evans)  
Ross and Co.

**LINSEED**

Kemp, W., and Sons  
Mumford

**LINT**

Liverpool Lint Co.  
Newsome (Surgeons)  
Robinson and Sons  
Seabury and Johnson

**LOOPARS**

Lynch and Co.  
Maw, S., Son and Thompson  
Toogood

**LOZENGES**

Blyton, T. Bage, and Co. (Me-dicated)  
Craven, M. A., and Son  
Gibson, R. (Manufacturer)  
Kanold's Aperient

**MAGNESIA**

Dinneford (Fluid)  
Murray, Sir James (Fluid)  
Southall Bros. (Liquor)

**MALT EXT., ETC.**

Poths (Dr. Linck's)

**MARKING INKS**

Barber, G., and Co. (Crimson)  
Christian, J.  
Clarke, J. T.  
Judson, J., and Son, Limited  
Murphy, J.

**MAT. MED. CAB.**

Evans, Sons and Co.  
Evans, Lescher and Webb

**MENTHOL**

A 1 Menthol Depot, J. G.  
Shirley, Proprietor  
Boehm, J. (Charms)  
Christy and Co. (Cones)  
Cocking and Co.  
Dundas, Dick & Co.  
Hockin, Wilson & Co.

Maw, S., Son and Thompson  
Metz, P. ("Acme" cones)  
Spies Bros. (Cockings)  
Todd, A. M.

**MERCURIALS**

Bush, W., and Co.  
Howards and Sons  
May and Baker

**METAL CASES, &c.**

Noakes, B., and Co.

**METHYLATED****SPIRITS**

Burrough, J.  
Gibb, L., Smith and Co.  
Harvey, J., and W.  
McNair and Co.  
Phillips, G., and Co.

**MIXING**

Bracher and Co.  
Carter, J. H.  
Follows and Bate  
Sherwin, G. E.  
Werner and Pfeiderer

**MORPHIA**

Macfarlan and Co.  
Smith, T., and H.

**MUSK**

Wink, J. A., and Co.  
Symes and Co. (Thibet)

**MUSTARD**

Finch, Rickman  
Johnson, J. H. and S. (Ess. Oil)

**MUSTARD LEAVS.**

Metz, Paul

**NIGHT LIGHTS**

Clarke, S.

**OILS, PAINTS, &c.**

Binchampton Oil Refining Co.  
Bush, W. J., and Co. (Santal Wood)  
Elvin Bros.  
Farmiloe, Geo., and Sons  
Follows and Bate (Mill)  
Peace, J. R., and Co.

**OINTMENT BASES**

Boehm, Gus. (Petroleum Jelly)  
Cheesebrough (Vaseline)  
De Pass, E. A., & Co. (Petrolina)  
Evans, Sons & Co. (Fossiline)  
Geoline Manufacturing Co. (Petroleum Jelly)  
Grindley (Petroleum Jelly)  
Haller and Co. (Lanoline)  
Metcalfe & Co. (Pure Wool Fat)  
Saunders, C.

**PAPAIN**

Christy, T., and Co. (Papaine-Christy)

**PAPER (Sanitary)**

Bourne, Johnson & Co.  
Mason & Co. (Waxed & Oiled)  
Wall and Co. (Wax Paper)

**PARALDEHYDE**

Zimmermann, A. and M.

**PATENT MEDCNS**

Atkinson (Infant Preserv)  
Barclay and Sons (General)  
Beecham (Pills)  
British College (Morrison's)  
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Moussin & Co. (Toilet Soap, &c.)  
Newbery  
Pears, A. and F., Soap  
Rimmel, E. (Specialities)  
Sainsbury, S. (Lav. Water)  
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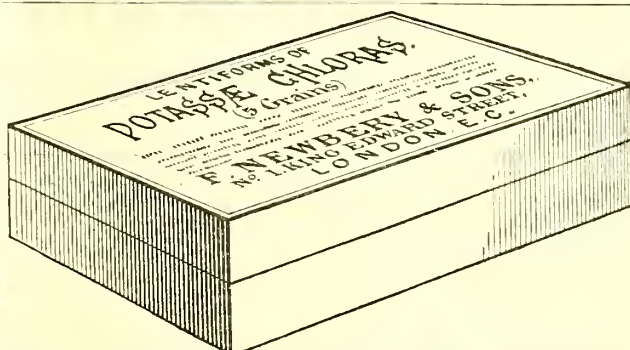
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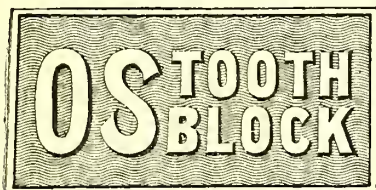
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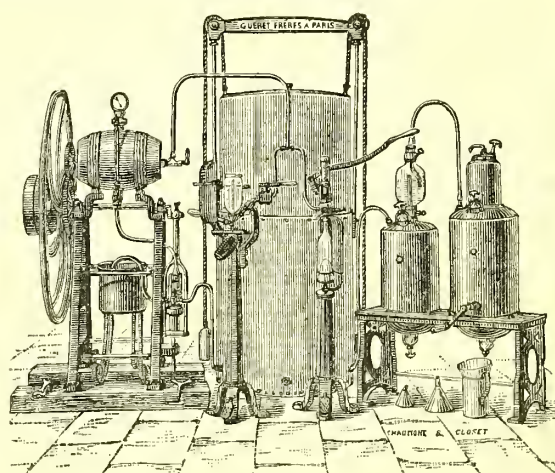
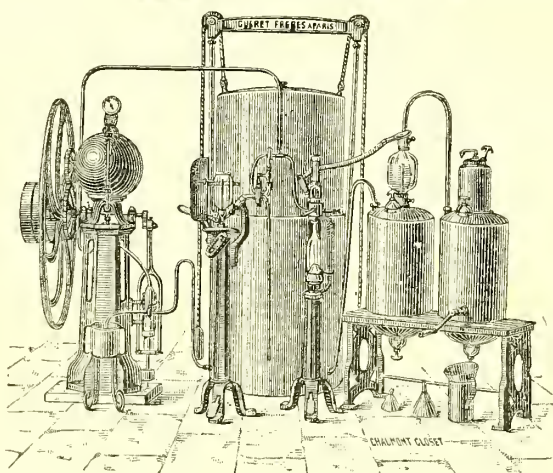
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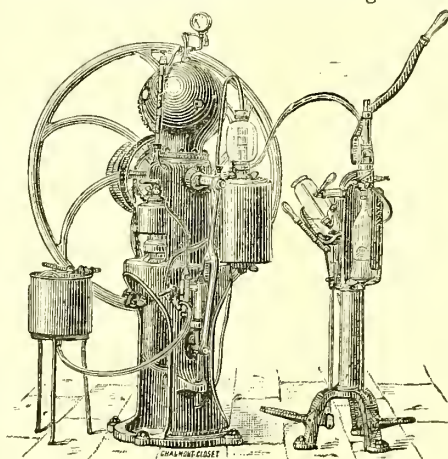
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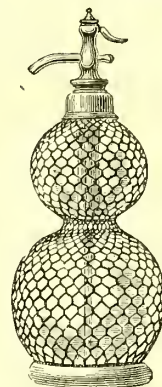
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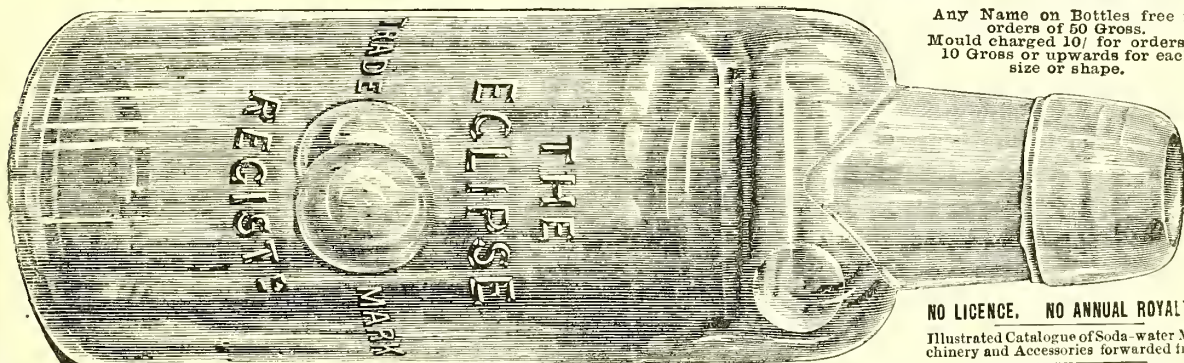
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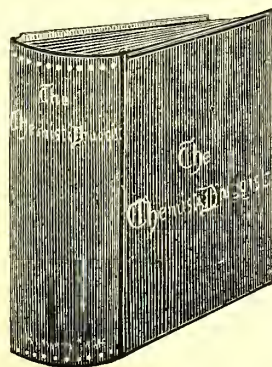
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We append a sketch of the reading case which we are now supplying. It is in black cloth with gilt letters. In it a quarter's copies of THE CHEMIST AND DRUGGIST can



be conveniently kept. We sell it for 1s., delivered free to any City house (we cannot deliver beyond the City), or we send it by parcels post for 1s. 3d. We have been sold out of these during the week, but are now restocked.

ADVERTISEMENTS of employers and assistants can now be received by us up to the first post on Friday mornings, and will be inserted in the current week's issue.

## BIRMINGHAM

HAS been the Mecca of all good pharmacists during the past week, and necessarily a large portion of our space is occupied with a report of the proceedings in that town, of special interest to pharmacists.

It will be noticed that the meeting of the Conference just concluded was marked by many novel features, which, no doubt, increased the attendance as well as added to the interest. The adoption of the opportunity to celebrate the tenth anniversary of the Chemists and Druggists' Trade Association gave a more comprehensive character to the gathering, and this too was enhanced by the presence of several notable Indian and Colonial visitors.

Another novelty in the Birmingham meeting has been the adoption of the President's suggestion that a committee should be formed charged with the duty of preparing a formulary of unofficial medicines, to be published, it would seem, by the Conference with the view of being prescribed with the letters "B.P.C." to indicate the authority. It is not clear how or where this committee is to work, but it is certain that they could do a considerable service to medicine and pharmacy without much difficulty, by publishing occasionally some authoritative formulae for preparations of new medicines which come into use between the editions of the Pharmacopœia. What will be expected of such a committee, however, and what the President expressly suggested should be done, is the imitation of proprietary specialities. Such work would be of undoubted commercial value, and would popularise the Pharmaceutical Conference among chemists and druggists; but unless the "B.P.C." preparations were markedly superior to "Jones's," the reputation gained would hardly compensate for the loss of dignity incurred by such an attempt to put down Jones's enterprise.

The Birmingham pharmacists seemed to have planned to fill every spare minute of the time which could be snatched from science and rest. They had a large number of conveyances ready at the close of each afternoon session, to convey members to works or localities of interest. Thus opportunities of visiting the mint where bronze and nickel coinage is made, Messrs. Gillott's steel-pen works, and other works, were afforded. At Bingley Hall a very comprehensive and interesting exhibition, exclusively confined to the industries of the neighbourhood, was open at any time to members of the Conference on presentation of their tickets, while drives in the suburbs after the day's meetings afforded to many the pleasantest recreation. The conversation on Monday evening, the Trade Association dinner on Tuesday, and a smoking concert on Wednesday evening made a good show of the social entertainments for which the Conference is famous.

The President, Mr. Greenish, is a favourite with all sections of pharmacists. Eminent as a studious and enthusiastic pharmacist, his sympathies run so strongly with those whom he regards as his oppressed and down-trodden brethren, that he is a little apt in championing them to be unjust towards the more enterprising men in the trade. The quaint humour of some of his passages brought down the house, especially when in two or three sentences he drew a picture of the country pharmacy where, "when a prescription makes its appearance once a fortnight or thereabouts, all hands, including the apprentices, are called forward to see this curious interruption to their ordinary duties." A compliment was paid to the President by the appointment of a formulary committee in accordance with his suggestion, but the elaborate scheme of provincial education which was sketched in the latter part of his address is hardly likely, we think, to win favour when it is looked into.

The corner pillar of these conferences is always the local secretary. He has to locate the visitors, correspond with them, keep the peace between them and the hotel-keepers, and be the confidant of everybody's complaints. He has to pick his way among local jealousies and foreign prejudices; to introduce strangers and separate rivals; to direct to the post-office and carry time-tables in his head, and never to lose his temper. Mr. Thompson succeeded in all these respects, and whenever anyone wanted to know anything at any time and any where, it was only necessary to turn round, and this model secretary was sure to be close by with an answer ready.

The excursion to Stratford-on-Avon, Leamington, and Kenilworth, which wound up the proceedings, covered some of the most interesting areas in England. The out-door enjoyment was somewhat marred by bad weather, but this added zest to the treat provided by the Leamington chemists, whose elegant luncheon is one of the pleasantest reminiscences of the whole series of meetings.

Our report this week comprises a large portion of the record of this year's Conference; we hope to complete our history next week. It will be seen that Mr. S. R. Atkins, of Salisbury, has been elected President for next year, and that the Manchester invitation has been accepted.

#### THE CHEVREUL CENTENARY.

(From our Paris Correspondent.)

THE celebration has been emphatically a grand success. There was, no doubt, a general wish to render the great chemist due honour, but the innate love of every true Parisian for public displays and demonstrations of all sorts was a powerful factor. The festivities began on Monday, the eve of the anniversary proper. At seven Chevreul rose as usual, and partook of his customary coffee and milk, prepared by the faithful Isoline, when Denise placed before him a huge pile of letters and telegrams from all parts, congratulating him on the happy event. As he was perusing them, with the help of his magnifying-lens, he could not help exclaiming, "But this is too much. No, no; I did not expect all this!" At the ten o'clock breakfast a welcome visit surprised him—that of his daughter-in-law and grandson. By the latter Chevreul has three great-grandchildren, and by a grand-daughter five more of the same generation. Of all these there is but one boy to perpetuate the family name. Even on this happy occasion the centenarian could not depart from his habit of drinking nothing but water. Not that he is a teetotaller by persuasion, but simply because he abhors the taste of wine and liquors, as he hates that of fish, and dislikes chocolate. His father (who died at ninety-one) and his mother (who lived to ninety-three) were both wine-drinkers, as are nearly all good Angevins. [The Plantagenets, it will be remembered, were from Anjou; in Normandy they are cider-drinkers.] The theory of Chevreul about diet is very simple; it is that each one should eat and drink what he likes, but always in great moderation.

Immediately after breakfast the ordeal began. There was a reception at the Boulevard St. Germain, by the Committee of Arts and Manufactures, another in the rooms of the Agricultural Society, and still another at the Academy of Sciences. As may be guessed, in each instance many speeches were delivered. The old chemist manfully answered every one of them, notwithstanding the torrid heat, and, feeling hungry over the exertion, went home to dinner. But there a huge bouquet sent by the artists of the Opera awaited him, to remind him that he had promised to attend that night's gala performance given in his honour. Having refreshed the inner man, he mounted again his coach. By the way, this legendary vehicle, so well known to Parisians, is said to be the same he rode in on his wedding day. It was then lined with yellow satin, but now the lining is of deep green leather. Even Joseph, the driver, who fifteen years since succeeded his uncle as the handler of the ribbons, had replaced his cap by an elegant new hat, to show it was a great holiday.

At the Opera, where Chevreul arrived in company with his son, daughter-in-law, and grandson, he was greeted with a regular ovation, lasting to quite a late hour; and, finally, on going home for the night he found awaiting him another pile of letters and telegrams, and an elegant box containing the grand cordon and cross of the Iron Crown, presented by the King of Italy.

But the real celebration took place on Tuesday, August 31, at the Museum in the Jardin des Plantes, not far from Chevreul's own residence. The spot is one full of memories dear to the pharmacist and scientist. The gardens were planted by the elder Jussieu; its full official name is *Jardin des Plantes Médicinales*. In it can be seen the houses formerly occupied by Buffon, Cuvier, Vanquelin, and others. Some of its trees have their histories; there is, for instance, a fan-palmetto, brought from China to Louis XIV., and a row of trees planted by Buffon, one of which bears an inscription stating, after the name, *Circis siliquastrum* (Linn.), that they were set in 1775 by the great naturalist, and frost-bitten on December 9, 1871, and December 9, 1879. They have recovered, however, with the loss of a few limbs.

The ceremonies were held in a new building, barely finished, intended presumably to become a hothouse for palm-trees, for it is lofty enough for the tallest specimen of this family. It was decorated somewhat in the style of a winter-garden, with handsome draperies of red velvet with heavy gold fringes, and rich gold and velvet seats, evidently supplied by the *Garde meuble* of the State. The walls were covered with the unrivalled Gobelins tapestries, a fit homage to the manufacturer's old director. Facing the main entrance, a blue silk veil hid the statue to be inaugurated later in the afternoon.

The idea of celebrating Chevreul's centenary originated with the students, who fondly call him the "Doyen des étudiants de France" (the oldest of French students, or, as you aptly style him, the Father of Students). But the Parisian press caught upon the idea as an eminently appropriate one, and perhaps as a means of making abundant "copy," and adding to the interest so lacking in summer; so, taking the project in hand, they made much of it, patronised it, and were its recognised organisers in its final shape. At the Museum their delegates reigned supreme, had the privilege of the floor, with their gorgeous tricolour badges, and had everything generally their own way, while the students' delegation came in modestly second or third best, with their plain badge of an oak leaf.

At precisely 2.15 Chevreul stepped in, supported on one side by M. Frémy, the director of the Museum, and on the other by an old officer, aged 94, a relic of the Napoleonic wars. The centenarian looked quite fresh after his exertions of the preceding day. He had consented to tame the wildness of his luxuriant white hair and trim some of the unruly locks; he appeared good for another century. Tumultuous applause greeted his coming. Everybody, in the diplomatic, the academic, and the Government tribunals, as well as in all parts of the immense hall, stood up bareheaded, while the band struck up the Marseillaise as the old chemist was conducted to the chair.

Soon after, while the band was playing the overture of Masaniello, the statue was unveiled amid great applause. It is only as yet the model in clay made by Guillaume, representing the old scientist sitting in a chair apparently addressing a class of students. The posture is most natural and the likeness excellent, as any one could easily judge. It is of what is technically known as heroic size, and will make a fine bronze or marble statue.

Then speech-making began; the addresses were, no doubt, admirable, and Chevreul stood them all bravely, but the readers of THE CHEMIST AND DRUGGIST will be spared the infliction. Yet one deserves notice, not that it was the best, but because it made most impression on the audience, although it came only the twelfth on the list. The speaker, a tall upright old man, with snow-white hair, and totally blind, on being led to the platform, said he was a great-grand-nephew of Buffon (the gentleman's name is Nadault de Buffon), and that he never felt so keenly as this day the blindness which prevented him from seeing the greatest scientist of the century, the worthy successor of his grand-uncle Buffon. But he would not depart without having kissed Chevreul's hand. As he spoke he shed tears; the ladies—and others too—were visibly affected, and many a handkerchief was held nearer the eyes than



the oppressive heat really warranted. At the end of his address the old gentleman was led towards Chevreul's chair, and the band struck up a soft sentimental air, probably to allow him to perform the kissing to slow music; but Chevreul would not let him, and only shook hands warmly with the old Breton. The following list of the actual speakers on the occasion will give a fair idea of the persons attending and the bodies represented. Addresses were delivered by Messrs. Frémy, the director of the Museum; Zeller, delegate of the French Institute; Janssens, president of the Academy of Sciences; Broch, on behalf of the three Scandinavian Academies of Sciences; Colonel Le Mat, on behalf of the Washington National Institute; Bosscha, delegate of the Dutch Scientific Society; Timiriassoff, delegate of the Moscow Agricultural Academy; Rössman, on behalf of the Italian Government; Le Bouteillier, delegate of the Paris Municipal Council; Chaumetton, the president of the Students' Association; Nadault de Buffon (mentioned above), the president of the Breton Life-saving Society; Behérain, professor at the Museum; Leroy, delegate of the Angers municipality; Vitu, on behalf of the Parisian press; and, lastly, Goblet, the Minister of Public Instruction.

To conclude the ceremony, all the delegations present, and there were many, passed before Chevreul, who shook hands with some of the leaders. Happily each member did not insist upon the same performance, and a French hand-shake is not so vigorous as the grip of an American politician, otherwise Chevreul would not have seen the dawn of his second century of existence. As it was, everybody quietly went home, and the centenarian was driven to his residence in good spirits, and ready for the evening banquet at the Hotel de Ville.

#### THE BANQUET.

This part of the ceremonies was duly and numerously attended: but, as is customary here, it was rather a corollary than a crown of the other festivities. Parisians are spare eaters and exceedingly moderate drinkers. At half-past six, the Salle St. Jean in the Hotel de Ville was crowded to its full capacity. At seven, Chevreul came in, smiling as ever, leaning on his son's arm, and while the band was striking the inevitable Marseillaise, took his seat at the table. The guests near him were General Pittié, M. Floquet, the President of the Assembly, Messrs. Goblet, General Boulanger, H. Fouquier, A. Vitu, Mayer, Lockroy, Clovis Hughes, Le Bouteillier, Janssens, &c. As may be seen from the names, while the Museum reception was the scientific part of the *fête*, the banquet was the political portion of it. The post-prandial addresses were delivered by Ministers Goblet and Boulanger, Messrs. Floquet, Henri Fouquier, and others. The last word was for M. Clovis Hughes, the Deputy for Marseilles, who, with the inborn taste of a Provençal for poetry, read very appropriate lines written to celebrate the occasion. Soon after the room was cleared for a ball, and at half-past ten Chevreul was taken home, apparently less tired than many younger men. At last accounts, he felt none the worse for the severe ordeal thus undergone.

#### THE TORCHLIGHT PROCESSION.

This popular feature of the festivities fell short of what was expected. Indeed, it was not the fault of the good Paris people. They were there in immense numbers, and brimful of enthusiasm, but the torchlights and military bands were too few. The official programme was strictly adhered to, and carried out to the letter, but an informal promise had been given that if possible a much greater display would be made. Thus a good many were disappointed, but they were good-natured enough; they went home without grumbling too much, and everything passed off without any incident worthy of notice.

PROFESSOR HAY, OF ABERDEEN, suggests the use of a saturated solution of common salt for estimating the strength of solution of carbolic acid. There are other uses to which saturated solution of common salt may be put as a test. For example, when added to and agitated with solutions of pepsin, such as pepsin wine, a scum of pepsin quickly ascends to the top, and from the amount of this separation a rough comparison may be made of different preparations.

## Metropolitan Reports.

**SUICIDE OF A MEDICAL MAN.**—Mr. David Williams, a medical man, who has been acting as *locum tenens* to Mr. Owen, one of the district medical officers of St. Matthew, Bethnal Green, while that gentleman has been on a visit to the Isle of Wight, committed suicide by taking prussic acid on August 24. He left a letter addressed to Mr. Owen, saying, "As I have not done parish work before, I have found some difficulty in that department."

**SUMMER TRIP.**—The employes of Messrs. Lynch & Co., Aldersgate Street, had their annual dinner last Saturday. Hitherto they have journeyed by road, but this year the programme was altered, mainly through the liberality of the firm. The party took rail to Windsor, and thence proceeded by the steam launch "Formosus" to Marlow, where a very enjoyable day was spent in superb weather. The trip was agreeable in all respects, and yielded the utmost satisfaction.

## Provincial Reports.

*Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.*

#### GOOLE.

**DEATH THROUGH MISADVENTURE.**—On Monday Dr. Grabham, Coroner for the Honour of Pontefract, held an inquest at Goole, touching the death of Herbert, aged nine weeks, son of Henry Partington, beerhouse-keeper, Railway Tavern, Boothferry Road, Goole. It appeared, from the evidence of Eliza Partington, the mother of the child, that she sent the servant on Saturday evening to a chemist for a pennyworth of Godfrey's Cordial, the child having been cross all the day. She (witness) gave the girl an old bottle which was labelled "poison." There was a brown coated substance inside the bottle, which she did not wash off.—The Coroner: It was very careless of you, Mrs. Partington.—Witness: Yes, it was. The bottle was brought by the girl, and she gave the child half a teaspoonful of the contents. She then found she had made a mistake, and said to Mrs. Doggett, a visitor, "Oh dear! I have made a mistake, and given him laudanum." Dr. Cathcart Bruce was sent for, and in the meantime she gave the deceased an emetic.—Martha Ann Gell, the servant, proved that her mistress told her to fetch a pennyworth of Godfrey's Cordial. She misunderstood her, and asked for laudanum.—Mr. J. T. Bentley, chemist, said he could not remember the last witness coming to his shop, as so many people came for laudanum. He sold pints of laudanum in a week. Laudanum did not require to be booked by law.—Dr. R. Cathcart Bruce proved that he administered an emetic, as he found the boy suffering from an overdose of opium. He bathed him in warm water, and tried every means in his power to restore him, but the child died at 11.15 the same night. He was surprised to hear the chemist say that pints of laudanum were sold in a week.—The Coroner replied that Goole was no exception; it was so in all large towns. It was more the fault of the law than it was that of the chemist. They could sell a bucketful of it if it were demanded, inasmuch as there were no restrictions by law to prevent them selling. He, in conjunction with Dr. Bruce, wished it to be distinctly understood that laudanum was a very dangerous thing to administer to children under any circumstances unless it were ordered by a medical man. Most of the patent medicines also contained opium or laudanum.—The jury returned a verdict "that the deceased died from misadventure, viz., by an overdose of laudanum administered to it by its mother in mistake for Godfrey's Cordial."

#### LONDONDERRY.

ON August 27, Mr. Robert Taggart, who for some years has been on the staff of Messrs. J. & G. McCaul, Londonderry, was entertained in the Northern Hotel by members of the trade and the medical profession prior to his departure for

London. Dr. G. B. McCaul presided. Mr. Taggart was presented with an excellent microscope and a gold Albert, as a memento of his many friends in Derry.

#### NEWCASTLE.

**A CHEMICAL TRANSACTION.**—At the Newcastle County Court on Aug. 16, before Judge Holl, Messrs. Crichton & Co., chemical merchants, Cail's Buildings, Newcastle, were sued by Messrs. Johnson & Co., starch manufacturers, Hull, for 2*l.* 2*s.* 6*d.*, under the following circumstances. It was alleged that on March 15 last the defendants agreed to sell to the plaintiffs 20 tons of soda crystal at 40*s.* 4*d.* per ton net. On the 19th they sent an invoice and asked for a remittance, which was sent on the next day. Several letters were written by the plaintiffs asking for the soda to be sent, and reminding the defendants that they had received payment. The latter acknowledged the receipt of the cheque, but did not send the soda. On April 5 a representative of Messrs. Johnson & Co. came to Newcastle and saw the defendants, and in consequence of what took place went to Messrs. Williamson & Co. and purchased soda crystal at 42*s.* 6*d.* per ton. The present claim was for the difference on the cost of 20 tons of soda crystal between the prices of March 15 and April 5—Mr. G. B. Saunders, manager for Messrs. Williamson & Co., and Mr. Jos. Heslop, manager for the Jarrow Chemical Company, Limited, gave evidence with regard to the market value of soda on the respective days. Mr. Pybus, who appeared for the defendants, questioned Mr. Heslop as to the accuracy of the quotations given in the *Newcastle Chronicle* for the days in question. Witness said the prices given in the *Chronicle* were not those quoted on 'Change.—Several other witnesses having been called on both sides, his honour found for the plaintiffs. Mr. Robson, solicitor, appeared for the latter.

#### NORTHWICH.

**THE KEY OF THE SITUATION.**—For several months sums of money of considerable aggregate have been lost from the offices of the Winington Chemical Works, Northwich. Suspicion fell on several of the forty clerks employed, but proof was not forthcoming. On Friday it was accidentally discovered that an office boy named Lightfoot had a master-key to all the desks containing valuables. He admitted the theft. On Saturday he was remanded to the sessions, bail being accepted.

#### OLDCASTLE (CO. MEATH).

**FURTHER CONVICTIONS UNDER THE PHARMACY ACT OF IRELAND.**—On August 30, at the Oldcastle Petty Sessions, Phillip Gaynor, of Oldcastle, publican and seedsman, and Mrs. Hart, also of Oldcastle, who keeps an hotel and a chemist's shop, the latter left to her by her late husband, who was an apothecary, were prosecuted by the Pharmaceutical Society of Ireland for selling a poison, to wit, tartar emetic, contrary to the regulations of the Irish Pharmacy Act. The prosecution was conducted on three counts: first, for selling poison to persons unknown to the defendants, they (the defendants) not being registered chemists; secondly, for not having the poison properly labelled, as directed by the Act; and, thirdly, for not having made, or caused to be made, an entry of the sale in the book which should be kept for that purpose. Each separate offence was fully proved against the defendants by Mr. W. H. Ashe, the Inspector of the Society, and the defendants were each fined 5*l.* and 20*s.* costs for the first offence, and 1*s.* plus the costs of court on each of the other counts. Mr. Sullivan, solicitor, Navan, prosecuted for the Society, and Mr. Lynch, Virginia, was employed for the defence.

#### SALFORD.

**THE FATAL GINGER BEER BOTTLE AGAIN.**—Mr. F. Price, the district coroner, held an inquiry on August 27 at Salford respecting the death of Joseph Laycock, mechanic, twenty-seven years of age. It was stated that for some time past the deceased had been of intemperate habits, and was under the influence of drink on Tuesday last. He went to bed at night in his clothes, but later on he came downstairs and drank a quantity of ammonia and turpentine from a ginger-beer bottle in mistake for ginger-beer. He was carried to

bed and Dr. Gray was sent for, but the deceased died, after suffering great agony, on Thursday afternoon. The jury, in returning a verdict of "Death from misadventure," expressed the opinion that the deceased had no suicidal intention when he drank the ammonia.

#### WIDNES.

**THE OUTLOOK OF THE ALKALI TRADE.**—Mr. Muspratt's recent gloomy speculations as to the immediate future of the chemical trade continue to be reiterated by one authority after another. Speaking at a special meeting of the Widnes Local Board held on Friday last to consider the advisability of proceeding with the completion of the new Town Hall buildings, Mr. Gaskell, jun., in commenting on the rapidly increasing rates of the town, said that "he was strongly of opinion that it would be a great mistake to increase their expenditure at a time when the alkali trade was in such a critical condition." The chairman, Mr. F. H. Gossage, quite agreed with Mr. Gaskell "that, so far as the Le Blanc process was concerned, the alkali trade of the town was in a very precarious state." After some discussion, the motion to proceed with the work was put to the meeting, and was negatived by an almost unanimous vote. A second proposal to the effect that the completion of the tower at an outlay of 650*l.* should be carried out was also lost.

### Trade Notes.

**THE NEW PROCESS OF MELTING AMBER** in large quantities, which was discovered at Koenigsberg, in Prussia, some months ago, and of which full particulars were given in *THE CHEMIST AND DRUGGIST* at the time, is now being worked commercially by Messrs. Stantien & Becker, who have recently erected six large melting stoves, turning out half a ton or more of molten amber per day. It is said that the product can compete successfully with the best Zanzibar copal in the market. Messrs. Stantien & Becker make an announcement in our advertising columns.

**ARTIFICIAL QUININE.**—Referring to the alleged discovery of artificial quinine Mr. J. C. B. Moens writes from Haarlem:—"The French chemist who in 1882 claimed to have discovered a synthetical process of quinine manufacture was so confident of his discovery that he actually submitted samples of his preparation to the Academy of Sciences for inspection. The almost incredible fact was then revealed that the so-called sulphate of quinine was nothing but sulphate of ammonia."

**LAWES'S CHEMICAL MANURE COMPANY.**—The fourteenth annual meeting of the shareholders of this company was held on August 27 at the New Corn Exchange Hotel, Mark Lane, Mr. W. Colchester (chairman) presiding. The directors in their report stated that the net profit made during the year amounted to 25,041*l.* 17*s.* 7*d.*, which, with 6,853*l.* 5*s.* 10*d.* brought forward, left an available balance of 31,895*l.* 3*s.* 5*d.* Out of this sum it was proposed to declare a dividend of 7 per cent. (less income tax) on the preference shares, and 5 per cent. (free of income tax) on the ordinary shares, to carry the sum of 2,000*l.* to reserve account, and to write 5,000*l.* off the land, plant, and goodwill account, leaving 7,569*l.* 11*s.* 9*d.* to be carried forward.

The Chairman, in moving the adoption of the report, said that the main facts in the balance-sheet were the net profits made and the balance carried forward. The alterations effected at their factory last year had fully realised anticipations, and had been the means of considerably reducing the cost of manufacture. The past year had been a most anxious one for the directors, and for some time he had been in doubt whether they would be able by reduced prices to meet the depression of the times. This they had done, and it showed that they had laid out their money to the best advantage. The company, he could assert, was never in a better position than at the present moment.

The report was adopted *nem. con.*, and the retiring directors (Mr. Colchester and Mr. Elborough) were re-elected.



# THE TRADE ASSOCIATION DINNER.

THE Chemists and Druggists' Trade Association took the opportunity of the large attendance of pharmacists in Birmingham to celebrate the tenth anniversary of their institution by a dinner held at the Grand Hotel on Tuesday evening. Mr. W. G. Cross, President of the Association, was in the chair, and was supported by Mr. Greenish and Mr. Barclay on his right, and by Mr. Maltby and Mr. Atkins on his left. The company numbered some 120.

Dinner over, the CHAIRMAN proposed "The Queen" in a warmly loyal speech, and then called upon Mr. Harrison (Sunderland) to propose "The Association."

Mr. HARRISON said he had been asked whether he was come to the funeral or the resurrection of the Trade Association. He could not think it was a funeral, for he had never heard of one of this character. He had never seen a resurrection, so could not tell what it was like. But he believed all recognised the value of the work that had been done by the Association, and were grateful for it in the best sense of the word, namely, with a lively sense of favours to come, for there was still much work to do. Sketching the history of the Association since they first met in Birmingham ten years ago, he pointed out how they had fought the momentous question whether a chemist should be allowed to recommend the articles he sold. Without their Association the question could not have been fought. He supposed no one would have undertaken it individually, and he knew of no body which would have accepted the task. They were not established to defend anyone who was breaking the laws, but they intended to defend any of their members who they considered were persecuted or denied full justice. He also claimed that the Association had established an *entente cordiale* with the various departments of Government with which they came in contact, as, for instance, the Board of Inland Revenue and the Trade-marks Department. With regard to the latter, he predicted that the time was not far distant when the trade would find how great a mistake they had made in not providing the Association with funds to carry on the important work in opposing objectionable registrations which they had commenced. They had also prevented obnoxious legislation. When the Government brought forward their late Poisons Bill they were first in the field to oppose it, and, admirably aided as they had been by THE CHEMIST AND DRUGGIST, they had been able to induce the Government to amiably shelve the Bill. Among the work which still remained to be done, he would instance the perfecting of the Pharmacy Act. No one, he supposed, would consider that the condition of pharmacy was perfect. The Pharmacy Act did not fulfil the conditions it aimed to establish, and the organisation of this Association was such that they could most readily bring pressure to bear on members of Parliament, and in other ways could influence the country. He called on Messrs. Cross, Reynolds, Umney, and Long to respond to this toast.

The PRESIDENT, in a brief reply, said he believed the trade would agree that the Association was too good a thing to part with. The Association had done good work in the past, but the best part of its life lay in the future.

Mr. REYNOLDS said the toast had been made so comprehensive as to include the thick and thin supporters of the Association. The President represented the former class, but his conscience told him that he belonged to the latter section. A new member of Parliament once told Lord Palmerston that he would support him when he considered him in the right. "My dear fellow," was the answer, "we want men who will support us right or wrong." At the births in State families witnesses were called in, and sometimes when there was great haste a humble individual was called in. It was in that capacity that he had been called in at the birth of this Association. This infant cut its teeth as soon as it was born. These were under the skilful care of Mr. Glaisyer. During the ten years of its life their bantling had been often short of pocket-money, but in the way it spent what it had it had shown a good example to a richer friend.

Mr. UMNEY said he was not a speaker on pharmaceutical politics, but he was very glad to add his testimony in regard to the valuable work which he was convinced the Association was doing. It had done much work which the rich brother of whom they had heard could not and would not do.

Especially he commended what had been done in resisting the savage onslaught of public analysts. In this respect the services which the Association had rendered had been immense.

Mr. LONG also responded. Some people thought that the head-quarters of the Association should be in London, but Birmingham, don't you see, was so very central that people could come to it from any part. He hoped the present depression was only temporary, and that the Association would soon rise, phoenix like, from the ashes with resplendent energy.

Mr. BARCLAY, in proposing "The Pharmaceutical Society of Great Britain," read a letter he had received that morning from Professor Attfield, who expressed his regret that he could not be present at the meetings of the B.P.C. and the C.D.T.A., as on account of his health he must follow the A B C of medical advice, and gave certain calculations to show the weekly cost of subscribing to the various societies connected with the trade, and described the special benefits which each offered in return. Alluding to Mr. Reynolds's remarks, he (Mr. Barclay) said it was easy for a society, like an individual, to be brought up with too much money, but he thought the Pharmaceutical Society had done a great deal of good work, and did not get credit for all that it did. But they were not the best friends of the Pharmaceutical Society who wished it to do such work as the Trade Association had taken up. He urged the members of the trade to assist in maintaining both societies. He coupled with the toast the names of Mr. S. R. Atkins and of Mr. John Moss.

Mr. ATKINS alluded to the difficulty of speaking extemporaneously on this subject, first, because one was in danger of omitting what ought to have been said, and secondly, because one might say what ought not to have been said. He regretted that the President of the Society was not there to respond to this toast, and he knew that he would have wished to have been present. But he (Mr. Atkins) had great pleasure in responding for the Society, for he was extremely loyal to it, and loved it deeply. From it he had derived far greater benefits than he could possibly repay during his short life, and to his association with it he owed many of the choicest friends and best influences of his life. There was no rivalry between the two societies, but each had its special duties to perform in overcoming the difficulties which surrounded the trade. It was the duty of brave men to overcome difficulties, and by united action they would overcome them and realise, he believed, a fine future for pharmacy.

Mr. JOHN MOSS said this toast was the one of all others to which he was pleased and proud to respond. He owed everything to the Pharmaceutical Society. It had taught him his business after his seven years' apprenticeship, during which he had learned nothing of the trade. All he saw around him, fellow students and others who had been under the harrow when he held the handle, would cordially respond to this toast.

Mr. HAMPSON also replied, and urged the necessity of the two societies.

Mr. WYLEY, in proposing the "British Pharmaceutical Conference," recalled the fact that this was the second time that Birmingham had been honoured by the visit of that body, and from what he had seen he did not think that this Conference would prove a failure. He enlarged on the scientific and social benefits which were due to the Conference, and urged every chemist and druggist to associate himself with it.

Mr. GREENISH excused himself from a long speech on the ground that he had had a hard day's work, and that his voice was not strong enough for much exercise. He alluded, however, to the services which the Conference had rendered, especially in promoting social intercourse among pharmacists.

Mr. PLOWMAN and Dr. THRESH, the honorary secretaries, also responded to this toast.

Mr. MALTBY proposed the "Pharmaceutical Press," which was acknowledged by the journalists present.

Mr. HARRISON proposed "The Secretary" (Mr. Haydon), who said the temporary decline of membership which the Association had experienced was an effect of the depression of trade, and that other societies had found themselves similarly affected. He proposed the health of the Chairman, which was heartily drunk, and modestly replied to.

# THE British Pharmaceutical Conference.

BIRMINGHAM, AUGUST 30, TO SEPTEMBER 2, 1886.



MR. THOMAS GREENISH, F.R.M.S., F.R.S., PRESIDENT OF THE BRITISH PHARMACEUTICAL CONFERENCE, 1886.

THE twenty-third annual meeting of this body has been held at Birmingham during the past week, under conditions and circumstances which rendered its success inevitable, and these were taken advantage of so abundantly by the spirited local committee that the success prognosticated was so freely developed as to make the late meeting one of the most pleasant of the now long series. The almost too-numerous attractions provided will appear as this report proceeds.

The first noticeable feature was the innovation of an informal opening on the (Monday) evening previous to the fixed commencement of the proceedings. This was held in the large hall of the Grand Hotel, in which fine establishment a large number of the members of the conference were located. From 8 P.M. until about half-past ten there was a constant circulation of company. The guests numbered altogether about 250, including 30 or 40 ladies and two or three medical notabilities of the town. The local stewards displayed a careful desire to make everyone contented, Mr. Barclay, the chairman, and Mr. C. Thompson, the secretary of the local committee, especially distinguishing themselves by an almost omnipresent assiduity. Messrs. Synner & Gilmer's string band and Mr. Bickley's Birmingham Glee Union successively administered to the pleasures of the evening. Gradually the company dialysed into the adjoining smoking room, and the occasional and various tones which reached

the bed-rooms of the journalists testified that the executive committee were at their labours until past midnight.

At early breakfast on Tuesday morning all the prominent members of the Conference staying at the Grand Hotel were punctual and vigorous, showing that a Spartan severity of discipline had ruled on the previous evening.

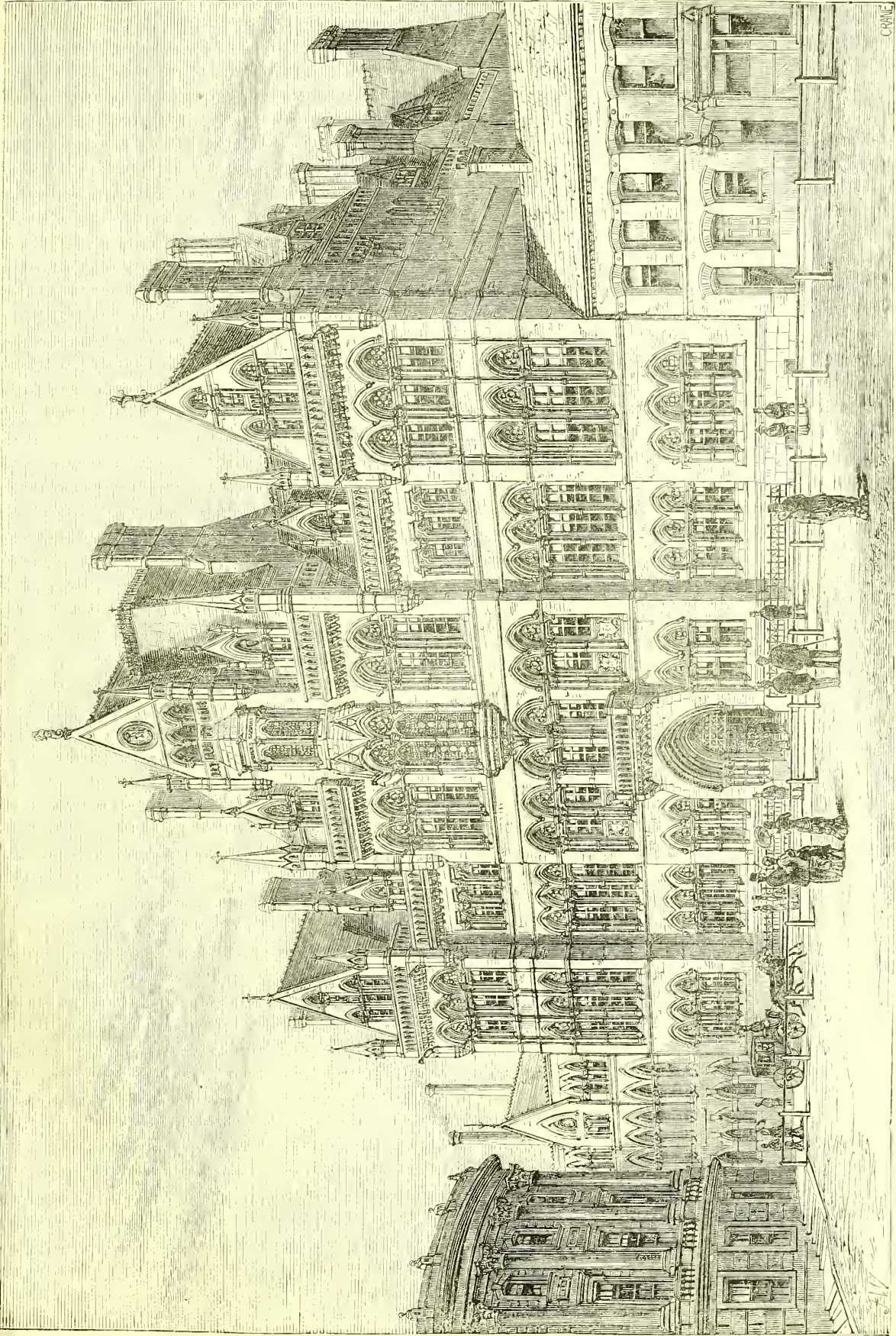
The Executive Committee met at 9 A.M. at Mason's College and discussed affairs in solemn secrecy. It was rumoured that the relations of the Conference towards this Journal furnished material for half-an-hour's debate, and that, notwithstanding the gallant advocacy of at least two of the most eminent of pharmacists, THE CHEMIST AND DRUGGIST was defeated. It may be added, however, that there will be no immediate suspension of publication.

Meanwhile, the ordinary members of the Conference had assembled in rather large numbers in the fine chemical lecture theatre of Mason's College, where Professor Tilden is generally to be found during the collegiate session. The President, Vice-Presidents, and Secretaries filed in a quarter of an hour behind time, and then the business was actually opened. When the President commenced his address his audience numbered about 150.

Before commencing the business indicated on the official programme—

Mr. THOMAS BARCLAY said that on behalf of his brethren in the trade he had to welcome the President and officers of the Conference to Birmingham. The local committee had during the past year spent a good deal of thought and some time in making arrangements conducive to the comfort of the members of the Conference visiting Birmingham. They felt that a duty devolved upon them not only for their own sakes, but for the sake of the town and district, to give a hospitable reception to the Conference, and they had been assisted in this way by several friends, notably by Dr. Tilden, whom they were glad to find amongst them that morning.—(applause)—and by whose influence they were enabled to use that room for the Conference. Professor Hillhouse had also largely assisted the Committee and they had had much assistance from everyone concerned. The business of chemists and druggists was a very exacting one. There was very little time for a holiday, and the Committee had endeavoured to make this visit to Birmingham as much of a holiday as possible consistent with the primary duties of the Conference. They had been fortunate in meeting at a time when an exhibition was being held in Bingley Hall of the technical industries of Birmingham. They had made a new departure in the arrangements of the conference, which had caused them some anxiety—he referred to the conversazione. From what he had seen and heard on the previous evening he did not think it would be the last time that the conversazione would form a part of their proceedings. Those of them who had visited the Conference had found the meetings in the afternoon had not been very well attended. A faithful few had kept the house, but in order to make the meetings more generally attended in the after part of the day they had determined to provide a luncheon, so that the members might be kept together instead of going hither and thither in the middle of the day. They hoped by that means, and by taking the members round to see the places of interest,





MASON'S COLLEGE, BIRMINGHAM.

CRANE



that they would be able to keep their friends well in hand, and to enjoy themselves better than in the past. (Applause.) It was twenty-one years since the Conference met in Birmingham before. At that time the father of the late William Southall occupied the position of chairman of the local committee, and the late William Southall held the position of local secretary. (Applause.) At that time they had as chairman of the Conference Mr. Henry Deane, whose name would live in connection with pharmacy as long as pharmacy lived. They had also as a member of the Conference Mr. Stoddart, of Bristol, who had such a loving heart, and who was always ready to assist his brethren. They had also as members Mr. Jones, of Leamington, Mr. Dymond, and others. These whom he had named, and many besides who attended then had passed away, and, now they were here twenty-one years afterwards, it was their duty to do their part, and they hoped that the impulse given to pharmaceutical education by the Conference commencing to-day would stimulate the younger members who were engaged in the pursuit of pharmacy in the town and district to rise up and prepare themselves to bear the heat and burden of the day. He hoped that, as pharmacy progressed, these young men would rise to take the place of the older men who now took the responsibilities of the Conference. On behalf of the local committee, he gave them a very hearty welcome, and trusted that this visit to Birmingham would be a very happy one. (Cheers.)

Professor TILDEN, who was received with cheers, said that Mr. Barclay had addressed them on behalf of the local committee. He (the speaker) could not profess to have received a commission to speak on behalf of anybody, but he was very glad to be permitted to speak for himself. It gave him very great pleasure to see there the faces of so many old friends, many of them known from the time he was a student himself, and it afforded him very especial gratification to know that the meetings of the Conference were to be held in those rooms. He did not think he ought to occupy their time longer. Everybody was looking forward to the address that they expected from the President, which, he thought, would be an exceedingly instructive one; and, as Mr. Barclay had said, it would probably serve as a stimulus to the younger members of the profession now living in the town. (Applause.)

The PRESIDENT, on behalf of the Conference, thanked Mr. Barclay and Professor Tilden for their words of welcome. He hoped that the meeting of the Pharmaceutical Conference would be like a grain of mustard seed, that by-and-by would grow into a fruitful tree. (Applause.)

Mr. Plowman (first hon. sec.) next read the list of delegates accredited to the meeting. These were as follows:—

*Pharmaceutical Society of Great Britain:* The President and Vice-President, with Messrs. Atkins, Cross, Hampson, Savage, Schacht, Symes, and Williams.

*The North British Branch of the Pharmaceutical Society:* (so described officially!) Messrs. Borland, Dott, Kinninmont, Mackenzie, Stephenson, and Storie.

*The Pharmaceutical Society of Ireland:* Mr. Brunner, M.A. (President), Allen, Payne, and Wells.

*The Aberdeen and North of Scotland Society of Chemists and Druggists:* Messrs. Kay, Paterson, and Sim.

*The Brighton Association of Pharmacy:* Messrs. Leigh and Savage.

*The Bristol Pharmaceutical Association:* Mr. Schacht.

*The Hawick Pharmaceutical Association:* Mr. Maben.

*The Hull Chemists' Association:* Mr. Bell.

*The Leeds Chemists' Association:* Messrs. Reynolds and Ward.

*The Leicester Chemists' Association:* Messrs. Burford, Clark, and Thirlby.

*The Liverpool Chemists' Association:* Messrs. Abraham, Conroy, Samuel, and Wellings.

*The London Chemists' Assistants' Association:* Messrs. Deck, Farr, and Millhouse.

*The Manchester Pharmaceutical Association:* Messrs. Bengier, Elborne, and Woolley.

*The Sheffield Pharmaceutical and Chemical Society:* Messrs. Kirkby, Newsholme, and Ward.

It will be observed that not all of those named were present, and Mr. Plowman stated that apologies for non-

attendance had been sent by Professor Attfield, Messrs. Carteghe, Brunner, Dott, Siebold, R. H. Davies, Tanner, Baildon, J. H. Bowen, C. E. Stuart, B. S. Proctor, Quinlan, Dechan, Inglis Clark, Tichborne, Sim, Makins, Gibson, Nesbit, Hills, Ritchie, T. Tyrer, and T. P. Gostling. A cablegram had been received from Mr. A. H. Mason wishing the Conference a pleasant meeting.

After reading the list of the official delegates Mr. Plowman said they had there some gentlemen who were in no way delegates, but who had come in acceptance of an invitation given to them by the executive committee, and who were distinguished Colonial and Indian gentlemen. He thought it right to announce at the time the names of the gentlemen: Mr. Bowen, the President of the Pharmaceutical Society of Australasia (cheers); Mr. D. S. Kemp, of Bombay (cheers), who until he left India did good service to the Conference as Indian Secretary for Bombay; Dr. Kernot, who had done the same service for the Conference in Bengal; Dr. Trimen, of Ceylon; and Mr. Herbert Roche, of Melbourne, who had done good service in forwarding parcels to Australia. Mr. Bosisto had sent them a message that he could not come, as he was now at work inspecting the wine-growing districts of Europe. (Applause.)

The PRESIDENT said he could not allow the list of delegates to be read without making one or two remarks. They welcomed them all, but especially those who came from the Colonies and India. To hear that they had delegates from the Colonies and India caused a thrill of excitement such as many of them felt at the time they had the International Congress in London. He was sure they would afford to each of them a hearty welcome.

Mr. D. S. KEMP (of Bombay) thanked the Conference on behalf of the Colonial and Indian visitors for the welcome they had received. The services which he had rendered to the Conference had been very small compared with the great benefit which the Pharmaceutical Society had conveyed to chemists abroad. The publications on pharmaceutical subjects which reached them constantly were of very great benefit to chemists abroad, and it would be saying very little for them if they did not when it lay in their power make a return to the Society for the services they received. He assured them that it afforded them very great pleasure to be present at this Conference. (Applause.)

Dr. THRESH (second honorary secretary) then read the

#### REPORT OF THE EXECUTIVE COMMITTEE,

of which the following is an abstract:—

Most of the business during the past year had been of a routine character. The publication of a General Index of the Year-books had, however, been an exception. Of this 1,250 copies had been prepared and a considerable proportion distributed. The General Index, consisting of 246 pages, had been issued at 2s. 6d., and the account had caused considerable financial loss. But the committee felt that the expenditure was fully justified by the enhancement in value of the Year-books. The affairs of the Conference in the Colonies and India continued to be most satisfactory, the foreign membership being fully maintained. Mr. David Hooper, F.C.S., Government quinologist for Madras, had been appointed secretary for that presidency. The deaths of Mr. Henry Sugden Evans, the secretary for Canada, and of Mr. L. B. Bush, secretary for New South Wales, who had both done good service to the Conference, were very greatly regretted. Mr. D. S. Kemp, who was leaving India, had resigned the secretaryship for Bombay, and Mr. Erasmus Beynon had been appointed in his place. Mr. A. H. Mason, F.C.S., and Mr. Ryder Horton had been appointed secretaries for Canada and New South Wales respectively. It was satisfactory that no other pharmaceutical meeting clashed with this Birmingham meeting. In 1884 the meeting of the British Association at Montreal, and in 1885 that of the International Pharmaceutical Congress had prevented the attendance of some of the members. The conversation introduced for the first time the previous evening was regarded as having been highly successful in promoting one great object of the Conference, namely, that of friendly intercourse among pharmacists. No grant in aid of research had been applied for during the year, and no report of any research for which money had been granted would be presented; but twenty papers would be submitted, and one, considered not quite



suitable, had been withdrawn by the author at the request of the Committee. Mr. Siebold was re-appointed editor of the Year-book for 1886 last December, and the manuscript of parts 1, 2, and 3 was on the table. Since the last meeting 98 gentlemen had been elected to membership. It was the painful duty of the Committee to report the death, during the past year, of Mr. William Southall, who was President of the Conference in 1880, and performed the duties of the office with marked tact and ability. The Committee also regretted to have to announce that the senior honorary secretary, Mr. Plowman, had tendered his resignation. His exertions on behalf of the Conference for five years had been so indefatigable that the Committee felt it a duty to record its sincere appreciation of his services.

Mr. UMNEY (treasurer) next read the

### FINANCIAL STATEMENT

FOR THE YEAR ENDING JUNE 30, 1886.

*The Hon. Treasurer in Account with the British Pharmaceutical Conference.*

1885	Dr.	£	s.	d.
July 1. To Assets forward from last year—				
Balance in hand at Bank .. .. .		220	16	7
Cash in Secretary's hands .. .. .		0	3	6
Messrs. J. & A. Churchill's account .. .. .		118	6	8
1883				
June 30. Sale of Year-book by Publishers .. .. .		19	6	8
" Secretary .. .. .		10	10	0
Advertisements, 1885 vol. .. .. .		115	13	0
" 1884 .. .. .		15	11	6
Subscriptions from Members .. .. .		651	17	2
Index Book, sale of, per Secretary .. .. .		0	15	0
Outstanding Liabilities, viz., Messrs. Butler & Tanner's account unpaid .. .. .		137	2	0
Difference to balance .. .. .		0	0	4
		£1,290	2	5

1886	Cr.	£	s.	d.
June 30. By Expenses connected with Year-book:—				
Printing, Binding, Publishing .. .. .		376	16	5
Postages and Distributing .. .. .		51	17	6
Advertising and Publishers' charges .. .. .		35	0	8
Editor's Salary .. .. .		150	0	0
Foreign Journals .. .. .		5	2	6
Expenses connected with Index to Year-book:—				
Printing, Binding, Publishing .. .. .		123	2	0
Postages and Distributing .. .. .		6	0	0
Secretary's Salary (Mr. Princep) .. .. .		100	0	0
Blue Lists .. .. .		9	6	4
Printing and Stationery .. .. .		35	1	1
Postages .. .. .		31	10	0
Expenses of Aberdeen Meeting (Rent Hall) .. .. .		5	5	0
" (Mr. Princep, Secretary) .. .. .		9	0	0
Petty Cash .. .. .		6	13	8
Expenses per Colonial Secretaries, Addressing Circulars and Distributing Bills, &c.:—				
New Zealand Secretary .. .. .		0	13	10
Victoria Secretary .. .. .		1	1	0
Assistant for Mr. Princep while ill .. .. .		1	10	0
Expenses for Bank Charges, Collections, &c. .. .. .		0	1	9
Cheque Book .. .. .		0	8	4
Outstanding Assets:—				
Messrs. J. & A. Churchill's account .. .. .		114	10	6
Balance at Bank .. .. .		219	7	0
Cash in Secretary's hands .. .. .		3	9	10
		£1,290	2	5

1886, July 1st, Assets { Cash .. .. .	£222	16	10
{ Churchill's account (since paid) .. .. .	114	10	6
Audited and found correct by { JAMES PATERSON, Aberdeen.			
{ C. J. ARBLASTER, Birmingham.			

### The Bell and Hills Fund.

1885	Dr.	£	s.	d.
July 1. To Balance in hand .. .. .		22	13	2
" Dividend on Consols, £350 .. .. .		5	1	6
1886				
Jan. 7. " " " .. .. .		5	1	6
		£33	1	2

1885-6	Cr.	£	s.	d.
By Purchase of Books for Aberdeen, per Hy. Kimpton .. .. .		10	16	9
Balance .. .. .		22	4	5
		£33	1	2
Being Cash in Bank .. .. .		12	1	5
And Dividends accrued on Consols, but not received prior to the closing of the Accounts .. .. .		10	3	0
		£22	4	5
1886, July 1st, Assets { Cash .. .. .		£22	4	5
{ Consols* .. .. .		350	0	0
Audited and found correct, { JAMES PATERSON.				
August 2nd, 1886. { CHARLES J. ARBLASTER.				
* Securities viewed.				

Mr. PATERSON (one of the auditors) said it occurred to him that, now the Conference was fairly established it might have a set of books somewhat more in accordance with modern notions. Those in use had grown up apparently with the Conference, and had been handed down from one to the other, but he thought as business men as well as professors of pharmacy they ought to have their books in thorough order. It would be a great advantage to those who had to succeed him in auditing the books if the whole of the transactions were in one cash book. He had to go into three cash books before he got the full details of the working of the institution.

The PRESIDENT remarked that Mr. Paterson's views would probably be met if the matter was referred to the executive committee.

Mr. PATERSON said he would be quite satisfied with that arrangement.

Mr. UMNEY stated that he had merely carried on the system of book-keeping handed down to him by his predecessors.

The PRESIDENT then moved the adoption of the report and financial statement.

Mr. SAVAGE seconded the motion, which was carried unanimously.

Mr. GREENISH then rose, amid warm cheers, and read the following

### PRESIDENTIAL ADDRESS.\*

To be chosen to fill the Presidential chair on the occasion of the meeting of the British Pharmaceutical Conference in Birmingham I feel to be a great honour: but it involves an amount of responsibility from which a timid nature would incline me to shrink, and the responsibility assumes larger proportions now that the vigorous efforts made to extend the membership to India and the Colonies have been attended with such marked success.

My first duty is to offer a cordial welcome to you all; it is an agreeable one, and I do it most heartily.

It may be that you will expect from me an encouraging review of a year of work done in the direction of the advancement of pharmacy together with the well-being of the pharmacist. I do not propose, however, to devote much of my address to a review of the past; I prefer to utilise its lessons in an attempt to grapple with the problems of the future. In the past, and, indeed, in the present, I see so little that is cheering, and so much that is discouraging, that I must ask you beforehand to forgive me if in speaking of them my remarks are somewhat decisive, my disapproval or condemnation freely outspoken.

### THE BRITISH PHARMACOPEIA.

When the Conference met last year in Aberdeen the new edition of the national Pharmacopœia was just being issued. Since then that work has been the subject of much discussion and criticism among pharmacists, and one result has been the publication of numerous and important errata so that allusion to that work on the present occasion can scarcely be avoided. Without going into details, the question may now be asked, Does the British Pharmacopœia of 1885 represent the advance which has taken place in pharmacy in the interval between that and the preceding issue? It is my own opinion—and I think it more than probable that there is a general consensus of opinion—that it does not; but that

\* The sub-titles inserted in this address are not the President's.

this last edition represents the diligent gathering of fragmentary papers with an absence of the applied practical knowledge necessary for the proper elaboration of such a work.

The production of a Pharmacopœia that shall be fully equal to our ideal of such a book must always be difficult, perhaps impossible; but a strenuous effort should be made to place it on a level with progress in the science and in the art of pharmacy. A British pharmacist taking part with pharmacists of other and more favoured nations in the deliberations on the formation of an International Pharmacopœia cannot but feel humiliation at the position occupied by the pharmacists of Great Britain in respect to the compilation of their national text-book. The validity of their claim to a more practical recognition is not a new idea, but one largely entertained and assented to by the medical profession. Pharmacists will therefore do wisely to press their reasonable and just demand for a more direct voice in the preparation of the formulae of successive editions of the British Pharmacopœia, for it is impossible for any man or body of men to resist indefinitely the pressure of surrounding opinions. Meanwhile, I cannot leave the subject without expressing the regret I feel, in common with all pharmacists, that our efforts for the advancement of pharmacy are not yet legally recognised as a sufficient basis for a claim to representation in the Pharmacopœia Committee of the Medical Council.

But are we, as pharmacists, free from some share of blame in this matter? Have we, as a body, taken any concerted action with the view of improving the processes for those preparations already in the Pharmacopœia, or have we taken any steps to examine new and hitherto little-known drugs, and to supply the most suitable formulae for the preparations of the same before they get into the hands of the "mystery-mongers" by whom they are brought to the notice of the medical profession? If the answers to these questions involve us in some reproach, I rejoice to know there is a prospect of this soon being taken away. In the research laboratory which it is proposed to establish and supply with modern conveniences for conducting original work, advanced students, already trained and disciplined in scientific method, will meet with encouragement and assistance to do thoroughly that which time and opportunity did not previously admit of.

I cannot refrain from expressing an individual hope, but one which I have no doubt will be shared by you all, that when the claims of original research are satisfied there may be found some quiet spot where vegetable histology in its application to *materia medica* may be systematically pursued by students in pharmacy, where the value of the microscope as a mean of identifying drugs and recognising adulterations and substitutions will be fully appreciated.

#### THE INTERNATIONAL PHARMACOPEIA.

The meeting of the International Congress in Brussels cannot be lightly passed over. The issue of an approved International Pharmacopœia, essential as a companion to, but not to supersede, any national Pharmacopœia, which shall contain only active drugs and their medicinal preparations, may be an event in the future; but whether in the near future or not, it is impossible that pharmacists practising pharmacy under different conditions, and subject to different pharmacy laws, can meet together in Congress without mutual advantage. Probably when the time arrives that an International Pharmacopœia may reasonably be expected, it will be found that many of the advantages sought for in the compilation of such a work have been gradually and almost imperceptibly attained by more frequent intercourse and familiar conversation. These international courtesies, whilst being very agreeable, are also very valuable, and if the issue of an International Pharmacopœia were to be considered as their sole and ultimate aim—in fact their "finality"—I could wish, for the sake of pharmacy generally, that the result should be postponed for at least another generation.

So much for the past; and now for the present and future.

#### WHAT SHALL WE TALK ABOUT?

An address may consist mainly of platitudes, or of statements of fact or of opinion with which those present would

be quite agreed; but I hold it as quite within the lines of a presidential address to start fresh topics, and give food for *active* thought. This is done in the United States, where the Presidential address is frequently referred to a committee to bring up subsequently a report upon suggestions contained in it, and, if desirable, to frame a resolution for adoption.

In considering the subject of an address for the present occasion, I have thought it might be of advantage to refer to the official definition of the Conference and its objects. "An organisation established for the encouragement of pharmaceutical research and the promotion of friendly intercourse and union among pharmacists." Whilst perhaps it may be admitted that the first of these has been fairly well attained, I fancy I see year by year a growing tendency to a diminution of that friendly intercourse which characterised our early gatherings. Recent meetings have shown signs that the Conference is getting into a sort of "rut"; there have been of late but few fresh faces, excepting those belonging to the places visited, whilst there has been an increasing number of papers summarised or read in the absence of the authors, and then, as a consequence, rarely followed by discussion or interchange of opinion. It may be that this is due to the comparative absence of non-technical topics from our discussions, and that, in our desire to avoid certain phases of pharmaceutical politics, we have ignored subjects that are of the utmost importance alike to ourselves and the public.

The question I would raise is, Shall the Conference be considered a "mutual tickling and admiration society," or can it employ itself in certain *active* duties for the benefit of its members and all those who practise the art of pharmacy?

I am very reluctant to throw a stone into so placid a pool of self-esteem, but I must confess to a feeling that the British Pharmaceutical Conference is an association which if it continues to exist for any practical benefit must assume more *active* duties than it has hitherto done, or the *raison d'être* of its existence will certainly be called in question.

#### THE BITTER CRY.

We cannot but feel some sympathy with that cry of distress which reaches us from pharmacists in the near and remote districts of Great Britain with regard to the present condition of our art. Excepting in some of the centres and the more important provincial towns pharmacy has no existence for pharmacists; the pharmacy of the country is absorbed by medical men, and the very soul of pharmacy is taken out of those who are ostensibly engaged in its practice, and whose legitimate calling it undoubtedly is. With a given number of inhabitants there is an average amount of sickness; but the pharmacist, especially in country districts, literally sees nothing of it, and he is obliged to turn his attention in other directions to satisfy the claims of his family and to relieve the burdens imposed on him by society and the State. When a prescription makes its appearance, once a fortnight or thereabouts, all hands, apprentices included, are called forward to see this curious interruption to their ordinary duties. It is in these "happy hunting-grounds" that our apprentices conceive their first ideas of pharmacy, and is it to be wondered at that when they enter the examination room a prescription should prove as great a curiosity as it did before?

If pharmacy in a large proportion of the places where it is supposed to be practised were only a little lower it would cease to exist. In fact I am not sure that we are not gradually, but surely, drifting into that condition when there will be a line of separation, not faint and obscure, but marked and determined, between the pharmacist proper and the retailer of drugs or the druggist.

The remedy is not so obvious. The entire separation of the practice of medicine from that of pharmacy, such as obtains in continental countries, suggests itself; but is this great change practicable within a limited period of time? Legislation on the subject must not be anticipated. Perhaps the pharmacist, showing greater scientific and practical skill in the conduct of his art than can be expected in a surgery, will acquire the greater confidence of the public, and I think it may be assumed that the higher and continually improving character of the education of the medical profession will insensibly tend to dissociate the practice of medicine from that of pharmacy.



## JONES'S PREPARATIONS.

But there is an evil growing up in the very midst of us, and assuming large proportions, which should be grappled with, I think, by this association. I will call it "wholesale prescribing for the medical profession," absolutely dictating to that body in what relative proportions a combination of well-known drugs should be prescribed. These proprietary preparations, for the most part "factory made," thrust upon the medical profession and unblushingly advertised, are sapping the foundations of true pharmacy, and at the same time depriving the pharmacist of the legitimate practice of his calling.

There can be no desire on the part of the pharmacist to limit the members of the medical profession in their choice of remedial agents for the treatment of disease: but that question is not involved in the consideration of this practice. Pharmacists with any dispensing business find it necessary to keep an extra "light porter," technically termed a "runner," to find out which of his neighbours has been the unfortunate purchaser of a 4s. 6d. bottle of some nostrum required to enable him to complete a 1s. 6d. mixture. Mist. Magnesie et Bismuthi Comp. and (Jones) within brackets is typical of a large number of them. Magnesia is well known; of bismuth the profession cannot be ignorant; but the charm lies in the "Comp.," which conceals the colouring and flavouring agents necessary for effect. In fact, these secret proportional combinations of ordinary drugs are accepted as if they were more effective than the same drugs combined in a prescription adapted to the requirements of careful diagnosis.

Pharmacists are harassed by the demand for these proprietary prescriptions, which prescribers take up without thought, and without a second thought thrust aside, their unofficial pharmacopœia being mainly the advertisement pages of the medical journals.

It is not the province of the pharmacist to call in question the therapeutic value of any medicine, but it does seem to him curious that a spirit said to be distilled from a non-volatile drug should possess any more medicinal value than ordinary spirit in a state of more or less dilution. What advantage can it be to therapeutic science to know that a certain compound has been found useful in a certain class of diseases if the composition of the medicine be a trade secret?

The members of the medical profession are largely responsible for the growth of this evil. Whilst in their collective capacity they strongly condemn "nostrums," yet individually many daily prescribe them. It is a practice perplexing to every pharmacist and derogatory to the medical profession, which justifies the apprehension expressed by Dr. Quain in his Harveian oration, that "the art of writing a rational prescription is in danger of becoming lost, and may indeed have a still more prejudicial influence now that the furnishing of gratuitous medical advice is being made the means of pushing the sale of proprietary nostrums."

This phase of pharmaceutical business assumes many different forms, and I ask you now to determine for your own protection to grapple with this hydra-headed monster before the knell of true pharmacy is sounding in your ears. It is by no means too early to make the effort, and it may not yet be too late; by-and-by you may cry like women for the loss of those privileges you have failed to defend like men. One way of doing this will be for us to see that we ourselves meet as far as possible the wants of the medical profession. If unofficial preparations of a certain type attain favour with the profession, why should we not as soon as possible place ourselves in a position to supply them? If, after careful examination of such compounds *quasi*-authoritative formulæ for their preparation were published, that portion of the medical profession which had seen such happy results from the use of the "nostrums" would, it might be hoped, if the formulæ were issued by the British Pharmaceutical Conference, be only too glad to prescribe them as Mist. Magnesie et Bismuthi Comp. B.P.C., &c., and every intelligent pharmacist could prepare them in his own pharmacy. This would apply to a long list of preparations of which mist. magnesie is typical.

## A B.P.C. FORMULARY.

Would not the Conference be a very proper body, and the very proper body, to take up this subject, to investigate

these much landed new preparations that make their appearance with the usual advertising *éclat*, and to give definite formulæ for the same, so that medical practitioners might be able for themselves to determine in what cases to employ the remedies persistently thrust under their notice with successful cases manufactured ready to hand? Medical science might thus be materially assisted and pharmacy elevated at the same time.

Any formulæ published under the auspices of the British Pharmaceutical Conference would be issued with its transactions. They might also be published separately as the "Unofficial Formulary of the British Pharmaceutical Conference," and thus be brought under the notice of prescribers with a suggestion that instead of ordering a preparation with one particular maker's name, as, for instance, "Jones," the formulæ sanctioned by the Conference should be indicated by the letters B.P.C. Surely a large portion of the medical profession would consider this a boon, and gladly avail themselves of it. I now leave this subject to be dealt with as the Conference may see fit.

## AN EDUCATIONAL SCHEME.

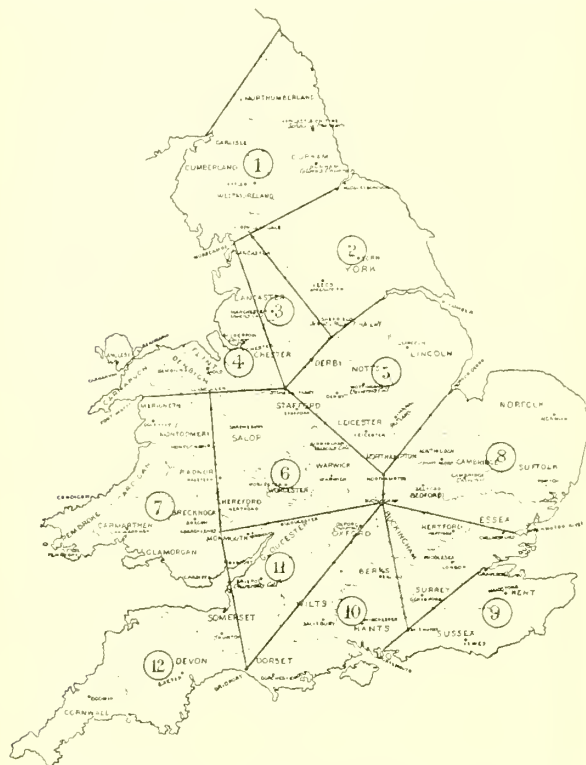
Another subject that demands immediate attention in the interests of the future of pharmacy is the still unsatisfactory and inadequate provision for pharmaceutical education in the provinces. It would be impossible to overestimate the service rendered by the Conference in affording an opportunity for pharmacists being brought into contact with each other; this alone is a matter of the first importance. The Conference has also been mainly instrumental in bringing to the front many young, but able, men, who may be looked upon to fill our vacant places with advantage to the body and credit to themselves. Wherever, too, the Conference meets there results from its presence something like a step—and perhaps the first step—towards organisation for the general good of the young men in that locality who are engaged in pharmacy. But notwithstanding all that has been done by this Conference, by the Pharmaceutical Society, and by other associations that may also exist, the trade in its broadest sense is still only very partially organised to work for the common good. Especially is this the case with regard to organisation for providing anything worthy of the name of pharmaceutical education.

The subject of Pharmaceutical Education is every year claiming a greater share of attention. One great difficulty that lies before us arises from the very loose manner of receiving and employing apprentices. It cannot be reiterated too often that a youth destined for pharmacy should, before leaving school, have been taught at least the elementary branches of a good English education, or he cannot be expected to master the principles of those sciences which directly or indirectly govern the practice of pharmacy. Another equally great difficulty is that, in a large majority of cases, the young man has no satisfactory opportunity for acquiring a knowledge of these elements of science during the period of his pupilage. The question which now awaits solution is how to provide an adequate remedy for a condition of things which has become chronic and which has paralysed every isolated effort made throughout the country. Schools have sprung into existence, but in a very short time they have dwindled into obscurity. Not long since, it was suggested by a member of the Pharmaceutical Society that prizes should be offered for competition in provincial schools. The project was entertained by the Council, but when the provincial schools were sought for they had all with one or two exceptions ceased to exist by a slow but gradual process of decay.

To my mind this is not due so much to absence of demand for such teaching, as to the need of organising—in fact, for focussing as it were—the demand in quantities that will command a supply. I know and feel that I am treading on debateable ground, but I will place my views before you for your earnest consideration.

I would suggest that for the organisation of the demand and supply of pharmaceutical education, as well as for other purposes which I will allude to presently, Great Britain might be mapped out into districts, say about fifteen, twelve in England and Wales and three in Scotland. Each district might be under the special supervision of a representative local committee, whose business it should be to establish one or more educational centres for its respective

district, utilising as far as possible existing university or college teaching, or when this is not practicable, negotiating for the establishment of suitable courses of lectures. Many of the divisions that I would suggest contain within their limits, and in more or less central positions, important educational institutions, which, if they do not already include within their curriculums exactly the teaching required,



would no doubt be ready to do so were there evidence of any adequate demand for it.

Upwards of eight hundred candidates come up for the Minor yearly, and nearly four hundred pass: this number should furnish fair-sized classes at so limited a number of



centres. But even if the classes were sometimes not large enough to be self-supporting, the committees would then be in a position to call upon the Council of the Pharmaceutical Society for the aid which it has over and over again, under successive Presidents, expressed its willingness to give whenever there is proper organisation.

The question then arises as to how these committees of organisation should be constituted. The most promising materials that I can see are the Local Secretaries of the Pharmaceutical Society resident in the districts, or at least a certain portion of them, and, in addition, any member of Council might be an *ex-officio* member of a committee. The manner of election of these Local Secretaries gives them essentially a locally representative character, and as I contemplate the possibility of the Pharmaceutical Society being called upon to contribute liberally from its surplus income, it seems only reasonable that those entrusted with this work should have some official connection with that Society. It will be remembered that the Local Secretaries are appointed by the Council on the nomination of the members and associates of the Society resident in the respective districts. Every town in Great Britain (except London and Edinburgh) that returns a member to Parliament and any other town in which there are resident not less than three members or associates in business is entitled to nominate a Local Secretary, the number of them at present being over three hundred. These committees could furnish annual or half-yearly reports to the Council and formulate recommendations. The incidental expenses of such committees might be agreed upon and paid, up to a certain amount, by the Pharmaceutical Society, and these several organisations would become, as it were, provincial branches.

Without trenching on the province of any other provincial association, such committees would keep the Council in touch with the entire country, and they could be made available for much useful work in connection with other business required by the Pharmaceutical Society. If I read the signs of the times aright, our next political struggle will be for the very existence of our present rights rather than the extension of our present privileges. We shall then require union and strength, both of which would be promoted by these organisations.

I need only remind you of the Poison Bill introduced by Lord Carlingford, in which it was suggested that the initiation of articles into the Poison Schedule should be taken from the Council of the Pharmaceutical Society, and that it should rest entirely with the Privy Council. Were that privilege allowed to pass from your control the position of the proverbial "toad under a harrow" would be preferable to that of the chemist and druggist subjected to the vagaries of a department practically ignorant of the exigencies of the medical profession and the requirements of the various industrial occupations. But on the other hand, in considering grave public questions, such as the sale of poisons, we must take care that the cry "our craft is in danger" be not the main consideration and stand in the path of legitimate progress.

British pharmacists cannot, however, be further organised for educational or any other purposes by simply reiterating abstract statements as to the desirability of such organisation and the benefits that would possibly accrue from it. In this respect the subject has already lost all charm of novelty; therefore as I have made myself responsible for once more bringing it forward, I feel bound at least to offer a contribution towards the building up of the edifice. Even if my contribution be condemned as wood, hay, and stubble, fit only to be burned, it may yet serve a good purpose, since the evoking of the active thought necessary to put it out of the way may also result in substituting for it at least a "button" of the precious metals. I will therefore venture to place before you in some detail, but still very briefly, my ideas as to the formation of the suggested districts, and then add a few words as to the probable expense.

District No. 1.—Commencing with the North of England, the first district might be defined by one line following the boundary of the two kingdoms and another line running straight from the mouth of the Tees on the east to Morecambe Bay at Morecambe on the west. The district would include Northumberland, Durham, Cumberland, Westmoreland, and a part of Yorkshire. A committee consisting of 21 members could be formed from the Local Secretaries of the Pharmaceutical Society, and they might perhaps find in the University of Durham, or the recently established School of Pharmacy at Newcastle-on-Tyne, materials for the voluntary organisation of the education required.

District No. 2.—Following the southern limit of the preceding division from Middlesborough, at the mouth of the



Tees, westward to a spot about Kirkby Lonsdale, a line drawn from thence south-east to a point a little south-west of Sheffield, and then striking north-west to the mouth of the Humber, would include a purely Yorkshire district represented by 28 Local Secretaries, and having Leeds, with its Yorkshire College of Science, and York in fairly central positions, besides Sheffield, with Firth College, on its borders.

District No. 3.—Proceeding further westward from Kirkby Lonsdale along the southern limit of district No. 1 to Morecambe, a line passing south-west to Stoke, and then north-west to the south-west corner of district No. 2, and following that boundary line north-westwards again to Kirkby Lonsdale, would include a district smaller in area than most of the other districts, but having a dense population. It would take in many important manufacturing towns in Lancashire, including Manchester, with Owens College, and portions of Yorkshire, Cheshire, Staffordshire, and Derbyshire. It is represented by 29 Local Secretaries.

District No. 4.—This district might be defined by the western boundary of No. 3 and a line drawn almost due west from Stoke to Port Madoc. It would include the remainder of Lancashire and Cheshire, as well as Denbigh and Carnarvon. Liverpool, with its new School of Chemistry, would be available as an educational centre, and the district would furnish a committee of 18 members.

District No. 5.—Returning to the East coast, another district might be defined by passing from the mouth of the Humber along the southern boundaries of districts 2 and 3 to Stoke; drawing from thence a line south-east to Northampton and then north-east to Boston Deep. The district would include Lincolnshire, Nottinghamshire, Rutlandshire, and parts of Derbyshire, Leicestershire, and Northamptonshire. There is a College of Science at Nottingham, and in the district there are about 27 Local Secretaries.

District No. 6.—Proceeding further westward from Stoke the limits of this district might follow the southern boundary of No. 4 to Llangollen; from thence pass due south to a point a little westward of Abergavenny; then due east to Buckingham, northwards to Northampton, and return north-westwards to Stoke. This would enclose Shropshire, Worcestershire, Warwickshire, and parts of Northamptonshire, Herefordshire, Radnorshire, and Montgomeryshire. Our present place of meeting, Birmingham, would present in its Mason's College at least one possible educational centre, and the district would contribute about 33 Local Secretaries to form a committee.

District No. 7.—A line passing from Llangollen due south along the western boundary of No. 6 and prolonged to Newport would divide off a purely Welsh district, consisting principally of the counties of Carmarthen, Pembroke, Cardigan, and Glamorgan. This district, although a fairly large one, is not at present so fully represented in the Pharmaceutical Society as most others; but nevertheless its 10 Local Secretaries might form a good working committee.

District No. 8.—Returning once more to the east coast, and starting from Boston, a line passing along the southern boundary of No. 5 to Northampton; thence southward along the eastern boundary of No. 6 to Buckingham, and then returning eastward to the German Ocean about the mouth of the Blackwater river, would enclose a very important area. It would include Norfolk, Suffolk, Huntingdonshire, Cambridgeshire, Bedfordshire, and the northern portions of Hertfordshire, and Essex. As, however, London would be quite easy of access from some parts of this district, it seems probable that its demand for provincial education would be somewhat diminished. The district has 32 Local Secretaries. I am not aware that there is any available educational institution in this district, although it boasts an ancient university. But probably it will be some time before Cambridge or Oxford will follow the example of continental universities and include a pharmaceutical curriculum within their calendars.

District No. 9.—Another important district, but similarly affected in respect to access to the metropolis, would be divided off by a boundary line passing from Gravesend and the mouth of the Thames to Portsmouth, including the counties of Kent and Sussex and a portion of Surrey. It would be represented by about 25 Local Secretaries.

District No. 10.—Another district might be marked out by a line starting at Portsmouth and passing a little way north-

east along the boundary line of No. 9 to about Midhurst, then due north to Buckingham, and finally returning to the English Channel in a south-westerly direction to a point about Bridport. This would provide for Hampshire, Berkshire, Dorsetshire, and part of Wiltshire. Here, again, I fear there is at present no available educational centre, but I have no doubt that the worthy Local Secretary at Salisbury, assisted by about 20 colleagues, would prove equal to coping with the emergency.

District No. 11.—Starting again at Bridport and following the western boundary of No. 10 north-eastwards to Buckingham, then along the southern boundary of No. 6 westwards to Abergavenny, and afterwards due south to Newport, and then across the Severn back to Bridport, a district could be formed of which Bristol, with its newly-established college for the West of England, might well be the centre. It would include a good part of South Wales, the counties of Gloucester, Oxford, and Monmouth, and parts of Herefordshire, Wiltshire, and Somersetshire, and would be represented by 15 Local Secretaries.

District No. 12.—The portion of the western boundary of No. 11, passing from the Bristol Channel to the English Channel would mark off a district consisting of Devonshire and Cornwall and part of Somersetshire. Here, again, there would be plenty of scope for the organising powers of the 21 Local Secretaries that would constitute the committee.

I feel that an apology will be due from me before I proceed further and make any suggestions respecting the organisation of the Northern Kingdom. I do not doubt that there are Scottish friends here more capable than myself for the task, and quite willing to take the work in hand if it requires to be done. My plea must be that what I venture to say in respect to Scotland, as well as England, is purely suggestive.

I think that the whole of Scotland might be divided into three districts, one covering a much larger area than the others, but not so densely populated.

District No. 13.—This district might be defined by a line drawn from St. Andrews, where there is a university, on the East coast, right across the country to Oban on the West coast. It would include the whole of the country north of Perth, and in Aberdeen would include one city at least that understands the organisation of education. There are 10 Local Secretaries in the district.

District No. 14.—A line drawn from Crieff, on the southern boundary of No. 13, so as to pass east of Stirling and strike the coast about the mouth of the Solway, would divide the remainder of Scotland into fairly equal parts. The eastern division would of course include Edinburgh, and doubtless, as in past years, the local representatives of the Pharmaceutical Society would be able to make advantageous terms with the university professors for the attendance of pharmaceutical students at their classes. The Local Secretaries are 9 in number.

District No. 15.—The western division would probably adopt Glasgow as a centre, and there again there is a university that might be utilised to some extent. There are 10 Local Secretaries in this district available for a committee.

It will have been noticed perhaps that I have omitted from the proposed divisions a considerable area around London. This I consider to be already provided for in the way of education, which is the subject that I am discussing on the present occasion. There is no reason, however, why the Local Secretaries of the Home District should not also form a committee to deal with pharmaceutical matters.

As to the financial portion of the problem it will be evident that at present an estimate pretending to approximate exactness must be out of the question. Any statement made, therefore, should be looked upon simply as a nucleus for criticism. Speaking first with respect to the expenses of the organising committees, the costs of them will depend upon the frequency of the meetings and the distances to be travelled by the committeemen to the places of meeting. This will necessarily vary very much, not only as between district and district, but even in the same districts. Supposing, however, that the limit of the expenses of each committee were limited to an average of 20s. per head per annum for each member of it. In that case, since there are only three hundred and fifty places entitled to return local secretaries,

even if all these local secretaries were included in the committees, the sum required would not exceed 350%. Then in respect to the expenses of the educational centres. It may be fairly expected that many of these, when once fairly established, would be self-supporting; others, in disadvantageous situations, would require help. But, taking one district with another, supposing an annual grant in aid of 20% per district were required, the sum total for the fifteen districts would only be 300%. The two items together would therefore amount to 650%, and this, I think, would be an outside estimate. Probably a large proportion of this sum is already raised and spent in more or less abortive educational efforts in connection with different associations throughout the country; but if only one-third of it were raised by local efforts, so as to ensure the lively supervision of self-interest, I should not be without hope that the Council of the Pharmaceutical Society would see its way to providing the remainder. Certain I am that the funds of the Society might be expended much less profitably than in this way, whilst it does not seem improbable that the greater popularity of the Society, resulting in an increased membership, would make up to a large extent for the expenditure.

At any rate, with such an organisation as that I have endeavoured but imperfectly to sketch to take charge of a school, any district could go straight to the Council of the Pharmaceutical Society and claim substantial assistance, and the Council would be only too willing to help, the result being a better understanding and more sympathy between them. And where there is at present no apparent demand, organisation may be the means of galvanising into some degree of activity many of those the law of whose present existence is apathy.

Perfection may not be within measurable distance, but a gradual improvement in the tone of the candidates for examination and a sound and healthy development might fairly be expected. In qualifying for an art which is daily becoming more scientific some opportunities for the student to acquire sound scientific instruction are imperative, and it would be found that the requirements of the daily practice of his art would react in the most healthy manner upon the scientific teaching.

There always will be found strong men, who, in spite of difficulties, teach themselves; but students who have been subjected to scientific training will outstrip these less fortunate comrades, and I believe that the great result of a movement such as I advocate throughout the Kingdom would be a prudent regulating of the average education of the candidates for the examinations.

If we now adopt Paley's definition of education as "comprising every preparation that is made in our youth for the sequel of our lives," we shall still find that the backbone of all true pharmaceutical education is absent, unless technical training go hand-in-hand with scientific teaching, the art being the practical application of the principles of the science.

These are some of the hard peas which the pilgrim pharmacist has to walk on daily; they irritate him and impede his progress. The problem before us is how to soften them. Some would recommend one course of treatment, others a totally different one; but so long as the peas are softened and we score progress my object in bringing these subjects into some prominence on this occasion will have been accomplished.

#### IN MEMORIAM.

At annual gatherings like the present the pleasure with which friend meets friend is sadly marred by the absence of those who can never more take part in our proceedings. We meet in Birmingham, and it is with feelings of sincere regret that I allude to the death of William Southall, who but a few years ago occupied this chair. He had attained a high position in his profession; a man of culture and an accomplished botanist. His death is not only a loss to scientific pharmacy, but society in its more extended sense can ill afford to spare him, and I will add in conclusion "another master mind is summoned from this world-wide council-hall."

Mr. C. THOMPSON (Birmingham) moved a vote of thanks to the President for the able address he had given them. The President's remarks with regard to secret remedies had met with their approval, and with respect to education,

there was no doubt he had struck at the right time. Whether the scheme was workable or not, at present, was a debatable point, but he had no doubt that in a few years some such scheme would have to be introduced.

Mr. ARBLASTER (Birmingham) seconded the motion, and trusted that it would be received with such acclamation as would convince Mr. Greenish that they fully appreciated the endeavours he had so long made for them. (Applause.)

Mr. H. B. BRADY (Newcastle) put the motion to the meeting, and it was carried by acclamation.

The PRESIDENT having thanked the meeting for the vote, Mr. Reynolds intimated that he would next day bring forward a proposition to give practical effect to the formulary suggestion broached by the President. He thought it would be the greatest compliment the meeting could pay to the President to take the subject into their consideration.

The reading of papers was then proceeded with.

#### CRYSTALLISED ACONITINE.

BY JOHN WILLIAMS, F.C.S., F.I.C.

IN the British Pharmacopœia aconitine is described as an amorphous alkaloid. And this is the form in which it has been prepared in England for many years.

Of late, however, a demand has arisen for the alkaloid in a crystallised state, and now that it is becoming largely used as an internal remedy its strength and purity should be more accurately defined, and should be, if possible, absolutely uniform.

The Pharmacopœia process gives the mode by which the English amorphous alkaloid can be obtained, but a few modifications are necessary to produce the crystallised aconitine.

*Aconitum Napellus* should be the only source of the root; investigators in England and on the Continent have shown that the various species of aconite do not yield identical alkaloids, as at one time was supposed, and great care should be used to secure roots from the proper plant only.

The root should be brought to the state of coarse powder only; if made very fine it is difficult to work. It should be exhausted with spirit of full strength, say 62° to 64° per cent.; if methylated spirit is used, care should be taken that the sample is free from gummy or resinous matters. About 4 oz. of tartaric acid to each cwt. of the root should be dissolved in the spirit. Cold maceration for about four days, followed by percolation, returning the percolate to the root for a second maceration of a day, then percolating; and even repeating the process a third time was recommended. By passing a sufficient quantity of clean spirit through the percolator at the end, the whole of the now very concentrated tincture can be obtained, and the root in this way entirely exhausted. The spirit must now be distilled off at the very lowest possible temperature, but the distillation should be stopped before the whole of the spirit has come over, and a little hot water added, and the whole placed in a water-bath gently heated until the last traces of spirit have been driven off; this frequently takes some hours. The thin aqueous extract is next filtered through coarse filtering-paper previously damped; resinous matter is separated and a clear dark-brown liquor produced distinctly acid to litmus-paper. Oily matter is removed from this by ether, the ether is separated, and to the aqueous extract is added a slight excess of concentrated solution of ordinary carbonate (not bicarbonate) of soda. The crude alkaloid is at once precipitated, and on warming the liquid the alkaloid will coagulate and become a resinous-looking mass, much as quinine does under like circumstances. This mass being separated is washed several times with moderately hot water, until the wash water comes away quite colourless.

The mass is then powdered and dried by exposure to the air, and subsequently macerated in several portions of pure ether. These portions being mixed and filtered are evaporated for the most part spontaneously. A considerable quantity of crystallised aconitine will be deposited; the crystals can be drained, and more crystals will be yielded. The crystals thus obtained are, however, always contaminated with a certain amount of gummy extractive non-crystalline matter; this can be removed by digesting the crystals for a very short time in a little very pure and cold ether.

M. Mandelin has lately recommended that only crystallised aconitine should be used medicinally. The author agrees with this, but he does not agree with M. Mandelin's further-



suggestion that in the process of making the crystallised article the base should be first converted into nitrate, from which the pure crystallised alkaloid should be afterwards produced. Mr. Williams believes aconitine to be an alkaloid of such delicate nature that it must be undesirable to bring it into contact with reagents of a powerful character, and though it is easily obtained from the nitrate by Dr. Wright's process, he (Mr. Williams) thought it quite possible that some effect had been produced, and that such aconitine was not exactly similar to the alkaloid of the root. On this point he had had corroborative evidence from microscopic examination of the crystals, which showed a variation of form between the two alkaloids. He had had some crystals on microscopic slides to demonstrate this difference, but these were mounted on gelatine, and the hot weather had caused the gelatine to swell, and the crystals had become disintegrated and not fit to show.

The author's crystallised aconitine (which had not been subject to the action of nitric acid) has been examined physiologically by Dr. Stevenson. He found that  $\frac{1}{3000}$  grain killed a mouse in twelve minutes, and states that it is in his opinion one of the most powerful lethal preparations he has ever examined.

The PRESIDENT said they had spontaneously accorded their thanks to Mr. Williams for his paper, and he need not ask them to do so formally.

Mr. GROVES (Weymouth) remarked that this description of aconitine was not new to them. Some of them might remember him producing to them about twenty years ago samples of aconitine, which he thought he showed before the Society; and also crystallised aconitine; and he at that time recommended that that body should take the place of all other aconitine preparations. He knew Mr. Williams had always great doubt as to whether aconitine could be produced in crystallised form, and although those crystals were produced he knew Mr. Williams had some doubt whether to accept them as aconitine or not. He was pleased Mr. Williams had come round to the view he had always entertained, that aconitine could be produced in this crystalline form, and he had no doubt they would be able to get it from Mr. Williams's firm. They were at present almost entirely dependent on France for this crystallised aconitine, which first came from Duquesnel. They knew how much temperature and rapidity of evaporation affected the crystalline form, as well as the presence of other salts in the liquid. They also knew that aconitine was a most complex molecule, and very tender, and they ought not to be surprised if they got modifications in the form of the crystal. It seemed to him the most serious thing they had to regard in crystalline aconitine was the occasional presence of crystalline "aconitine" devoid of poisonous properties. Some time ago when he was working on a considerable quantity, he got an ounce and a half of crystalline matter which, when he came to examine it with the microscope, did not exactly resemble the previous specimens; and on repeating the crystallisation he managed to separate two entirely distinct bodies—one devoid of alkaloidal properties, the other the ordinary napellus aconitine. It was very difficult to know how to separate the non-poisonous from the extremely poisonous, and at the present time he did not know any means of doing it. Dr. Wright had examined this non-poisonous body and proved that it was aconitine, and he gave it the name of picroaconitine. He (the speaker) thought it was the same alkaloid that Dr. Broughton had discovered in the *Aconitum heterophyllum*. He showed it to Dr. Broughton, who said it was certainly not a distinct alkaloid, so they gave it the name of picroaconitine. Some time after that Mr. Cleaver, in examining an aconite found an alkaloid which was non-poisonous, so he asserted he had obtained from this green extract precisely the same alkaloid that he (the speaker) had obtained from the root of *Aconitum napellus*. He pursued his inquiry a little further, and found it was not *Aconitum napellus*, but *Aconitum paniculatum*. His statement had not been proved by any other investigator. It seemed to him (Mr. Groves) that that Conference should in some way organise a committee to further the growth of official aconite and get a final examination made. If this could be done it would be a great help to them. He gave his views on the aconitine question some three years ago.

He did not believe in the use of tartaric acid and carbonate of soda in the manner which had been described. He had worked in the ordinary way, using common reagents, and proceeded cautiously and with the ordinary amount of common sense, and had no difficulty in producing the crystalline nitrate. He had always separated the alkaloid as nitrate, and he maintained that was the proper way to do it, and he got the crystallised aconitine thereby.

Mr. LONG (London) observed that the subject of aconitine was of the greatest importance. It was not simply a question of buying the stuff, but they poor pharmacists were often called upon in their loneliness to grapple with these difficult subjects: for instance, in cases where a prescription was handed to them in which the issues of life and death were involved, and where the strength of the preparation was not known to them. He wished to know whether cultivation would impair the usefulness of the root, and whether the cultivated variety would be as powerful as that which grew wild. He thought the percolation system described by the reader of the paper would have a tendency to cause re-absorption of the extractive matter, just as a sponge soaked up water, and considered that distillation *in vacuo* would be better than any other system.

Mr. E. M. HOLMES said he had paid a little attention to the genus aconitum and had found twenty-four varieties of what was known to botanists as *Aconitum napellus*. Under these circumstances it seemed to him that it would be almost impossible to obtain the root of uniform character in commerce. He considered Mr. Groves's suggestion was a very excellent one, viz. that a typical form of the plant should be cultivated in sufficient quantity over the kingdom. As far as he was concerned he should be very pleased to do what he could to carry out that proposal. Mr. Shenstone, of Colchester, had expressed a wish to know what quantity of root they were likely to want cultivating for preliminary requirements. He thought they might be able to set to work in the autumn of the present year. (Applause.)

Mr. W. WILMOTT (London) thought they were all extremely indebted to Mr. Williams for bringing this question forward. The British Pharmacopœia gave no dose. He supposed it was presumed that it should not be used internally at all. Of course it was very powerful, and he could answer for its power in an amorphous form, as some time ago when suffering from a severe attack of neuralgia he tried it very tenderly, using  $\frac{1}{150}$  grain in two pills, and, afterwards increasing the dose slightly, symptoms came on that induced him quickly to abandon the aconitine. He agreed with Mr. Williams that uniformity was the one grand thing to be achieved. If they could obtain that he thought it would form a very useful remedy.

Mr. UMNEY drew attention to the researches of Dr. Wright and Mr. Groves, who had clearly shown the kind of roots to be used. After alluding to *Aconitum ferox*, the German root, and other varieties, he said there seemed to be great difficulty in obtaining a supply of the official root in anything like large quantity, and the best thing would be to cultivate the plant in this country. Dr. Wright well knew upon what he was working, and others also, he was sure, knew the sources, botanically and otherwise, of the roots upon which they worked.

Here Mr. GROVES said that Mr. Umney was wrong. The roots they worked upon were simply the roots of commerce. They had to accept the statements of the importers.

Mr. UMNEY said the roots of *Aconitum ferox* were to be had in immense quantities twenty years ago; then came Japanese root, and now they were wholly supplied by the Germans; but the roots were largely cultivated in Cambridgeshire and other parts of England.

The PRESIDENT said that some years ago he was employed for a long time making sections of aconite root, and he thought that the roots of commerce differed very much. He recollected on one occasion there was one particular kind of which he wanted to get a root, and he was utterly unable to get it in England, and he succeeded in getting it from Prague. He had been much surprised to hear a gentleman engaged in aconitine investigation say he had examined that particular aconite, and did not find any alkaloid in it. Having the opportunity of speaking to him afterwards he asked where he got the aconite from. The gentleman said the extract was supplied by a wholesale house. If the wholesale houses are relied upon—he did not say anything in



disparagement of the wholesale houses—but if a man did not take the roots himself and extract the aconitine from the roots, he did not think the extracts they got second-hand were to be relied upon, and he thought it would very much add to their knowledge of the aconites if trouble were taken to make a section of the root to ascertain really whether it was true aconite or not. But if one three-thousandth of a grain was capable of killing some animal, it was not a thing with the uncertainty about it that they could use in medicine at present.

Mr. A. W. GERRARD (London) was able from his own experience to corroborate much of what Mr. Williams had said, especially in reference to the necessity of employing tartaric acid in order to neutralise the alkaline matter in the methylated spirit when this is employed. There was no doubt a large portion of the alkaloid was destroyed if evaporation was carried too far, and especially if the temperature was too high. He asked whether the syrupy matter mentioned in the paper was alkaloidal, and whether it did not contain a sufficient proportion of crystalline aconitine, and worth a further attempt at crystallisation? He did not like nitric acid in this process, and should prefer to use acetic acid or hydrochloric acid. He mentioned that Dr. Ringer had made use of some crystalline aconitine he had obtained of Cleaver's make and found it extremely active. The first thing they should aim at was to define aconitine and endeavour to reach uniformity. If they were to define aconitine, it did not matter from what source they got it.

Mr. ALCOCK (Birmingham) asked if Mr. Williams took the amorphous aconitine and the crystalline product from the amorphous aconitine, what was the effect of chemical reagents on the two? Mr. Williams did not seem to have dealt with his products chemically but simply microscopically, but he had no doubt he would be able to tell them what the effect of the common reagents which had frequently been spoken of in conjunction with aconitine was on his products. Mr. Alcock went on to speak of the difficulty he had some twelve months ago in getting official aconite root. He could not get the English variety, but succeeded in getting some German napellus root, which was very rotten. If investigators tried the roots he had twelve months ago, he feared they would not find aconitine in them in any shape or form. He thought it would be better that we English people should not go, as we sometimes did, on the Continent for things that might be got at home.

Mr. MOSS thought it was very generous of Mr. Williams to have put before them with such circumstantiality of detail as he had a manufacturing process for crystalline aconitine. He was encouraged to ask Mr. Williams what kind of root he used in making his crystalline aconitine. They knew that the different root in the market yielded aconitine of different character, for instance, *Aconitum napellus* yielded aconitine and *Aconitum ferox* yielded pseudo-aconitine. Another question was whether the roots used were wild or cultivated, because some authority, he forgot who it was, rather insisted that the wild aconitine yielded the crystalline aconitine more readily than the cultivated, and he also insisted on the use of tartaric acid for the extraction of the crystallised aconitine.

Mr. BURFORD (Leicester) asked whether the gummy matter was not alkaloidal.

Mr. WILLIAMS, in replying, said that the gummy matter was, he thought, an alkaloid somewhat changed, probably by oxidation. There was, indeed, no doubt it was alkaloidal, but he did not think it would crystallise. He thought it had lost the property of crystallisation, and his contention was that aconitine was so delicate that it was constantly changed by manipulation. It was changed in their hands, but once they got it into a tangible crystallised form, he believed it could be made uniform. As to the root, he was quite at the mercy of the wholesale dealers. He had never been able to procure any root of a special character that he could say was absolutely of one species, and it would be a very good thing indeed if, by any means, they could obtain roots which they could rely upon as being really of the species they wished to examine. Mr. Holmes had pointed out that there were several varieties of the napellus, and that they might get great variety unless the plant was very carefully watched. That was a very important thing which did not strike him until Mr. Holmes had mentioned it. But it showed that the changes which had been spoken of might be and frequently were the result of slight variations in the root.

He could not agree with Mr. Gerrard that it was of no consequence what root they started with for the aconitine provided they got it pure and free from all other bodies. He thought even the crystallised alkaloids were distinct, and in that he agreed with Mr. Groves and other authorities. He had been astonished at the great variety of shapes of the crystals as seen under the microscope. Mr. Groves did not seem to think that of much importance; but when he told him and the meeting that the same sample of aconitine apparently always yielded the same crystal it showed that there must be something more in the mere accidental circumstance of crystallisation than temperature. For instance, he would show them one or two forms. [The speaker here drew on the blackboard aconitines of various crystalline forms.] The crystal which he called the normal aconitine was rhombic with points—aconitine when it had been acted upon by nitric acid crystallised in a sort of star form. It appeared as though the crystal had been pinched up, or a number of crystals radiated from a centre and were tied together at one end. A sample given him a few weeks ago by Mr. Holmes, made, he thought, by Mr. Cleaver, crystallised with great facility, the normal form being a square; another form crystallised in massive cubes. Those solid cubical crystals appeared to be inert. The first thing they wanted was to get a certain root, the second step was to have a definite process of working, and in time, but only in time, they would get to know something of the aconitine.

#### CERTAIN DERIVATIVES OF HYMENODICTYONINE.

BY W. A. H. NAYLOR, F.C.S.

IN continuing my study of the alkaloid hymenodictyonine my latest efforts have been directed towards gaining some knowledge of its behaviour when acted upon by iodine, bromine, and oxidising agents. An outline of the working details and the results obtained are supplied by the following paragraphs:—On gradually adding a weak solution of iodine in ether to an ethereal solution of the alkaloid the iodine became decolourised, and a deep orange-red precipitate was formed, which quickly agglutinated and presented the appearance of a black resinous mass. By continuing the addition of iodine until it ceased to be decolourised an excess could readily be recognised. The resultant varnish-like mass was washed freely with ether—in which it was but little soluble—and then treated with hot alcohol. It was soluble to a considerable extent in cold alcohol, but its solubility increased with increase of temperature. It was hoped that by the use of a limited quantity of this solvent, acting on the compound at a suitable temperature, to be ascertained by experiment, followed by a gradual process of cooling, a crystalline derivative would separate out. The expectation was not realised, for the substance that separated under these conditions was always amorphous.

The experiment was next tried of adding iodine in large excess to a solution of the alkaloid in much ether. This had the effect of producing a more flocculent precipitate at the moment of its formation, but towards the end of the reaction the several particles began to coalesce. This viscid mass was treated precisely as the previous one, and refused to be coaxed into crystallising.

A third attempt was made by precipitating a weak solution of the alkaloid in ether with rather less iodine than would be required to produce complete precipitation. The precipitate was subjected to the same treatment as the previous ones, and resembled them in the granular appearances of their separations from alcohol, notwithstanding the inducement to assume some definite form offered by the varying temperatures to which they were subjected.

Although after much labour and thought I have failed to obtain an iodo-derivative in a crystalline form, I do not regard it as one of those organic principles to which the faculty of crystallisation has been denied, but believe that a more perfect knowledge of the condition of its formation in a state of purity would lead to its production. This belief is encouraged by a close correspondence to a possible formula which may be assigned to the iodo compound prepared by the method last described, that of incomplete precipitation. That portion of the viscid mass which dissolved in a limited quantity of hot alcohol and separated out on cooling gave in



a series of iodine determinations by combustion with quick-lime the equivalent of 47.52 per cent. The formula  $(C_{23}H_{40}N_2)_2I_3 \cdot 211H$  would require 47.92 per cent. of iodine. Throughout these combustions it was observed that a fatty-looking substance distilled over, having the characteristic odour of naphthaline. From solution in alcohol it crystallised in white scales.

Several attempts were made to produce a crystalline bromo-derivative, but without success. The flocculent precipitate which resulted from the reaction of ethereal solutions of bromine and alkaloid after treatment with hot alcohol gave on cooling a granular-looking body, which was chiefly remarkable for the facility with which it parted with a portion of its bromine. A stated and definite compound was not obtained.

The action of oxidising agents on the alkaloid next claimed attention. The alkaloid was converted into sulphate, and to its aqueous solution was gradually added a 1-per-cent. aqueous solution of potassium permanganate until the liquid became permanently coloured. It was then concentrated by distillation to a low bulk and filtered. The filtrate was neutralised with sulphuric acid and evaporated to dryness. The residue was exhausted with hot alcohol, which on cooling gave a deposit, and when quite cold was filtered. The filtrate was evaporated, taken up with water, and converted into a silver salt, which was decomposed by sulphuretted hydrogen. Filtration, evaporation, and subsequent purification of the residue with alcohol and water left a feebly-coloured acid having the following properties:—

It was markedly acid to litmus and had a bitter acid taste. It dissolved readily in alcohol and water, and was but little soluble in ether. It united both with bases and acids. Its hydro-chloride in aqueous solution, when evaporated over sulphuric acid, assumed an arborescent crystallisation; the platino-chloride under the same conditions crystallised in plates or prisms. The acid was not precipitated with sulphate of copper, but gave with nitrate of silver a white gelatinous precipitate, which in the moist state became rapidly reduced on exposure. Lead acetate gave a white granular precipitate. Two determinations of the platinum in the platino-chloride dried at  $115^\circ C$ . gave 29.50 per cent. of platinum. The formula  $(C_6H_5NO_2 \cdot HCl)_2 PtCl_4$  requires 29.72 per cent. of platinum, and this is the platino-chloride of a pyridine-mono-carboxylic acid, viz.  $C_6H_5 N$ ,  $COOH$ . Further, the acid, or one of its salts, when distilled with lime, yielded as a product of decomposition a volatile base which possessed the peculiar odour and general properties of pyridine. This property of the acid, coupled with its behaviour towards reagents and the percentage of platinum in its platino-chloride, may be accepted as reliable evidence that it is a carboxylic derivative of pyridine. If nitric acid be used in place of potassium permanganate the same acid is obtained.

It would therefore appear that in common with the rest of the non-oxygenated alkaloids hymenodictyonine is constitutionally related to pyridine.

The PRESIDENT said he need scarcely ask them for their thanks to Mr. Naylor for his paper. It might not be of general interest, but it showed a large amount of work. (Applause.) If there was anyone present who had any knowledge of the subject, he should be glad to hear his observations.

Mr. ALCOCK observed that a doctor—an Indian authority—told them at the Conference three years ago in London that the hymenodictyon plant was considered to be a valuable febrifuge if it could be brought into some pharmaceutical shape. He wished, therefore, to ask Mr. Naylor what was the best solvent to get out the whole of the principle of a strength, one in one, or something of that kind?

Mr. NAYLOR replied that he did not know of any single solvent capable of removing the whole of the alkaloid from the bark. But as a single solvent, alcohol was by far the best. He might be allowed to say that he had retained a considerable proportion of the alkaloid with the view of placing it in the hands of some eminent physiologist; so he hoped now that its chemistry had been fairly studied, that they would soon be able to know something about its physiological action. (Applause.)

## THE ASSAY OF ELATERIUM.

By H. W. JONES AND F. RANSOM.

THE authors record in their paper the result of experiments made with elaterium and elaterin, and recommend the following method of estimating elaterin in the drug.

Macerate in chloroform one gramme of finely-powdered elaterium in a covered dish for a few hours, transfer to a miniature glass percolator (*e.g.* the barrel of a small glass syringe) and wash with chloroform, allowing about 10 c.c. to pass through the marc after the menstruum has begun to pass in a colourless condition. Place the percolate in a small dish and evaporate the chloroform at a gentle heat. Treat the residue with a small quantity of pure absolute ether, and transfer to a small percolator or funnel plugged with cotton-wool. Wash with pure ether until at least 10 c.c. have passed through colourless, and reserve the ethereal washings. Dissolve the elaterin so obtained by passing chloroform through it whilst still in the percolator or funnel, and evaporate the chloroformic solution once more to dryness in a small dish. Treat the residue so obtained with ether exactly as before, dry and weigh. Allow the united ether-washings to evaporate spontaneously, until the bulk is reduced to about 3 c.c. Transfer to a small cylinder (*e.g.* a 10 c.c. measure) and allow the separated elaterin to deposit. Carefully decant the coloured supernatant ethereal layer, add 4 c.c. of pure ether to the residue and again decant and dry. Finally add the amount formed to the bulk previously obtained. If this part of the process be properly conducted the recovered elaterin will be nearly white. In a trial experiment elaterin was recovered equal to 1.9 per cent. A small amount will still be retained by the ether, and this, operating exactly as described, and as far as could be made out, will be equivalent to something like 7 milligrams, or 0.7 per cent. more than actually found, and that amount should be added by way of correction. It is absolutely necessary to use pure anhydrous ether.

The authors are still working on the chemistry of elaterin, and promise further results on a future occasion, especially in reference to its solubility in ether.

The PRESIDENT said he need scarcely ask the Conference for an expression of opinion on a paper which involved so much work and contained so much useful information.

Mr. J. WILLIAMS said he had found caustic potash acted well as a purifier. If the paper—which he imperfectly heard—did not include that process, he would suggest that the writers should try it.

Mr. JONES said he understood that Mr. Williams advocated treating the crude elaterium with potash. The writers of the paper found the process given in the Pharmacopœia so unreliable that they discarded it altogether, and simply powdered up the elaterium, and exhausted directly with chloroform, and then they dried the residue with ether. After washing it completely, and after the ether had been allowed to act so as to remove traces of colouring matter, they found it still necessary to redissolve in chloroform.

Mr. F. H. ALCOCK asked whether the writers had tried the process of first washing the elaterium with ether to remove resinous matter, and then treating the washed elaterium with chloroform. As he understood the paper, the process it suggested was exactly the opposite. The writers first dissolved in chloroform, and afterwards washed the residue with ether.

Mr. H. W. JONES replied that the last speaker's method would involve the use of much more ether, and again ether did not act so readily on elaterium as did chloroform. He could exhaust it very readily with chloroform, but it would scarcely touch the bulk if he commenced with ether. At any rate, the great objection to the use of ether in the first instance was that more of the elaterine must be taken into the solution.

In reply to Mr. SCOTT Mr. Jones stated that they had tried many things, benzene and bi-sulphide of carbon, but the latter only removed the colouring matter which ether removed in the final washing.

Mr. SCOTT remarked that his samples of elaterium had been a little different to those mentioned in the paper. He found that bi-sulphide of carbon had more action on the vegetable impurities than ether by a very long way, and the root was pre-ented in a far cleaner condition.



## A B.P.C. FORMULARY.

ON Wednesday morning Mr. Reynolds (Leeds) submitted a motion, of which he had given notice on the previous day, with regard to non-official remedies. He said that five years ago, when presiding at the York meeting, he alluded to what was done in France in connection with non-official remedies. As they were aware, for some years the Pharmaceutical Society of Paris had taken charge of this subject, in order to give a uniformity in strength to new preparations. He recollected using as an illustration the great inconvenience which English pharmacists were finding from variation in the amount of acid and the strength of the numerous class of syrups of phosphates. Now it was manifestly most desirable that uniformity should be attained, especially in the case of new remedies. If there were diversity of composition it was evident that the reputation of those remedies must be judged by an unfair standard, and in many cases deserving medicines might get into ill repute from not having been fairly tested. Last year their American friends made a considerable advance. In the report of the Pittsburg meeting of the American Pharmaceutical Association—which, of course, only reached England this year—there was an account of what they did on the subject. They accepted a formulary which had been prepared, and which had been issued for about two years, by the pharmacists of New York and Brooklyn, and they added, as an appendix to their annual report, the first issue of this formulary. It contained about 81 preparations. No doubt the nature of those was very much dependent upon the nature of American pharmacy. He saw there were no less than 52 elixirs, 10 emulsions, 6 syrups, and 3 wines amongst the 81 preparations. The feeling expressed at Pittsburg was unanimous and cordial towards this step being taken, and he felt the greatest confidence, without arguing the whole question, that there was a feeling on the part of English pharmacists that something ought to be done; that the evil was a very great one; that the way in which proprietary medicines were forced on the medical profession, and in which they were induced to prescribe particular makes, was contrary to the general interests of their body and very damaging to physicians themselves. He did not propose needlessly to multiply arguments, but would submit his resolution: "That, in order to secure greater uniformity of composition and strength in non-official remedies, and also to enable the medical profession to prescribe them with definite knowledge of their qualities, and without indicating any particular maker, the British Pharmaceutical Conference undertakes the preparation of a formulary of non-official remedies." (Cheers.)

Mr. ATKINS seconded the resolution. He said he had only just been asked to undertake this duty, and he was quite unprepared to speak to it with any degree of fulness or consciousness of accuracy; but, so far as he saw the drift of the propositions, he felt he could conscientiously support them. The President had told them on the previous day of the difficulty the metropolitan or West-end chemist had in having to keep a special agent called a "runner" to obtain special information on the article that might be prescribed by some London physician. If that were the position of the London dispensing chemist, he asked them what was the position of the provincial chemist who had no "runner"? Certainly he could wire to London for a speciality, but he would have to wait for the article till it came by parcel post. Not long ago he had four prescriptions handed to him by a lady, who said she would call in an hour and a half for them. Without opening the prescriptions he unwisely promised to have them ready for her in the time; but, on reading them after she went away, he found they each contained a speciality which, unfortunately, the runner could not obtain on the spot, and he had to confess his inability to execute the instruction within less than about forty-eight hours. But he wanted to go upon higher grounds than that. They wanted accuracy; they wanted to set their faces against empiricism; as an educating body, the Pharmaceutical Society had been constantly teaching and preaching this doctrine, and he thought that practically the step proposed was in the right direction. It would be a kind of Extra Pharmacopœia which was suggested, and they in the country were under great indebtedness to an Extra Pharmacopœia—(cheers)—but clearly that work, comprehensive as it was in its second edition, had not embraced

the whole of the difficulty. The question was, he trusted, removed from the ground of debateable politics, which, wisely, were excluded from their discussions; but it was pre-eminently a practical question, and would, he hoped, receive a large amount of support. He took it that Mr. Reynolds proposed that there should be a formulary, published on the French lines, of non-official remedies. He had pleasure in supporting that suggestion.

Dr. SYMES supported the motion, which was one he had proposed some years ago when there was no Extra Pharmacopœia, and when they were in greater difficulty than at present on this subject. The British Medical Association at Brighton had recently, he believed, formed a committee for considering therapeutically the value of new drugs, and it would be very opportune if they on the present occasion should form some kind of committee to consider the best means of pharmaceutically preparing those drugs. They would then be in a position to work hand in hand with the committee and get the whole subject thoroughly threshed out.

Mr. MARTINDALE cordially supported the resolution, seeing that there were agencies at work that were scouring creation to get a new drug if they could, and seeing that they could not stand still. It was of the utmost importance that they should have uniformity of strength in their preparations. He had been placed in such a position that a number of medical men called upon him to get to know something of the strength of drugs, he being looked upon as a little of an authority. He found such a variety of strengths of preparations that he thought it necessary to compile the Extra Pharmacopœia which had been referred to, and he gave the chemists the advantage of his knowledge. (Applause.) There was given in it the strengths of many preparations that were non-official at the time of its compilation. Something of the kind was wanted, and he was glad to say it had been fairly recognised by medical men and by chemists too. It would be one of the best means to get a claim upon the Medical Council, to whom they could say, "If you don't give us a right to help in making a Pharmacopœia, we will make one of our own." (Applause.) They knew how to make preparations to suit the public taste, and it was absurd for the Council to say that only such things as they gave them should be used medicinally. They could make the articles more palatable, and to think that the people would willingly continue to take nasty drugs was an absurdity. A little more of what was called elegant pharmacy would have to be attempted. With regard to what Dr. Symes had said, there were reports given from the Collective Investigation Committee on the subject of pharmacognosy and therapeutics on two drugs this year. They were only preliminary reports on the subjects of hamamelis and terebene. This committee had undertaken the investigation of new drugs in the direction of seeing whether they might be admitted into the British Pharmacopœia or not. It was quite a proper movement for them to take, and they (the Conference) should take a similar course by following Mr. Reynolds's suggestion in making preparations suitable for their trial and experiment. Of course what was said at Brighton in some of the reports applied to nostrums as well as to the more popularly published formularies. Some of the secret preparations even were recommended as having special virtues, but at the same time on the question of hamamelis the report agreed that all the preparations seemed to have some medicinal virtues. If this committee were formed, he should be glad to give any assistance he could.

Mr. SCHACHT remarked that the work Mr. Reynolds suggested was a very desirable one for them to undertake, but he was not quite sure of the way in which with existing machinery it could be carried out by the Conference. He thought a book like the American one would be most useful; but it occurred to him that the body from which such a book should emanate was rather the Pharmaceutical Society of Great Britain than the Pharmaceutical Conference, and mainly for this reason, that he hardly saw the possibility of the Conference framing such machinery as would bring about that result. It struck him that a large amount of experimental work would have to be done, and he could appeal to no better authority than Mr. Martindale on that point. If that were so, where was their home in which to experiment? If Mr. Reynolds's proposition was that a committee should be appointed to do the work at their private laboratories, the work would lose a great deal of its value, since it would



on each individual point become the work of one man. It was to be hoped that a work would be produced which would be the result of the joint labours of a committee working together, and seeing the whole of the results for themselves. Such a process could, he thought, only be done by a body having a home of its own, and a laboratory of its own. He wished to know whether Mr. Reynolds saw his way to the appointment of machinery to do the work in that way.

Mr. ROBINSON asked how the carrying out of this resolution would affect the "Year-book of Pharmacy," which he thought was intended to serve the purpose, and whether it was proposed to issue a new Pharmacopœia with all the remedies; or was it proposed to refer the matter to a committee to consider the question? He understood that when a gentleman sought for a new remedy he did so in the hope of getting a reward; but if he knew that his discovery was to be given away his investigation might be influenced.

Mr. INCE cordially supported the proposition. One objection that he had to the proposal, that it might be objectionable to Mr. Martindale, had been removed by that gentleman's remarks in its support. He thought they were bound to compliment Mr. Martindale on his generosity. With regard to the method of carrying this proposal into effect, the machinery was not cut and dried, but he was quite sure that in proper time means would be got to execute it. He was decidedly of opinion that the Conference was the body that should undertake the work. It was quite hopeless to expect that such a proposal would be brought forward and put in hand by their constituted authorities, who acted by authority, and were necessarily compelled to take considerable care in what they did, thereby delaying their work. If the Conference undertook the work, they had knowledge and experience, acquaintance with drugs, and facilities for gaining information; and they could produce it at convenient periods—once a year, or upon any dates that might be thought requisite, without so much consideration and so great delay as were necessary when the thing was official and issued by authority. He should be glad if the Conference undertook this work, because they constantly heard remarks all over England that their meetings began and ended in social conversation and intercourse, and this would prove that those were not their sole objects. (Applause and laughter.)

Mr. MARTINDALE said the volume would be quite distinct from his Extra Pharmacopœia and would interfere but slightly with it. He should be glad to allow the members of the Conference or the Committee to have anything they pleased from his book. It would be better for the Conference to do the work than the Pharmaceutical Society, because the former could do it independently, whilst the latter came too much into contact with the Medical Council. He could foresee that there would be a certain amount of practical pharmaceutical work to be done, and that could be relegated to the Committee.

Mr. ATKINS wished to know where the practical work was to be undertaken.

Mr. NAYLOR observed that they would be understood to be going upon the ground of counteracting what they were pleased to call the evil effects of proprietary articles. They could not get over that fact; that was mainly the object in view—at any rate those proprietary articles would come under the definition of non-official remedies. There were one or two instances of this furnished in the reports of the previous day. It seemed to him that the Conference placed itself in a somewhat inconsistent position, unless it was prepared to be perfectly frank and generous in the matter. There were a great many gentlemen present who remunerated themselves by non-official remedies. If these gentlemen were fully prepared to place that knowledge in the hands of the Conference, or rather through the Conference in the hands of the profession, then they would be in a perfectly logical position in taking the course proposed. But he thought there would be a degree almost of odium in selecting certain preparations to put into the formulary, while distinguished members of the Conference were still reaping the benefit of certain proprietary articles themselves. (Applause.) There was just that point where the Conference would feel itself in that sense responsible for the individual action of certain members. He would not say one word against proprietary articles; he did not wish to be misunderstood on that point. He thought the suggestion covered too wide a ground, but at the same time would not offer any opposition.

Dr. SYMES questioned the position taken up by Mr. Naylor.

Mr. MARTIN thought Mr. Naylor quite mis-understood the drift of the resolution. It was not to publish the formulary of proprietary medicines, but to counteract the effect of want of uniformity. As to the difficulties of carrying it out, the Society was about to endow a research laboratory, which would be available for members of the Society, and most of them were also members of the Conference.

Mr. SCOTT supported the general objects of Mr. Reynolds's proposition, thinking it not desirable to enter into any details at this period.

Mr. GROVES said the difficulty was occasioned mainly by doctors writing for proprietary articles. If the practice was not discontinued he did not see what was to be derived from the formulary. He would suggest that the consideration of the subject should be deferred for a year, or till the Pharmaceutical Council should be approached with regard to it. By doing the latter the Conference would have the benefit of a laboratory in which to conduct experiments. Unless they acted in conjunction with the medical profession they would be acting in vain.

Mr. A. SOUTHALL, speaking as a country pharmacist, thought it would be a great advantage if something was compiled in the way of an official formulary for certain tinctures and remedies constantly brought out in their different journals, putting them altogether in proper form.

Mr. HAMPSON supported the resolution, remarking that if the work was satisfactorily done the formulary introduced under the name of the Conference would be, in the course of time, accepted not only by the pharmacists but by the medical men of the country. If they did so, then those cupboards of useless preparations throughout the businesses of pharmacists would be done away with. Hitherto he had described those cupboards as chambers of horrors, for, as one gentleman had said, expensive preparations were bought for one or two prescriptions and the remainder had to be relegated to these terrible cupboards. If the Conference could show it was able to prepare a formulary, and it was accepted, a practical step would be taken to display their ability to frame a national pharmacopœia.

Mr. WILMOTT observed that Professor Atfield had endeavoured to show that the British Pharmacopœia was really the work of pharmacists, and yet they required something like an Extra Pharmacopœia. When medical men ordered these patent medicines they did so because patients believed in them.

Mr. REYNOLDS, in reply, said there seemed to be a consensus of approval on the resolution, which was gratifying, and it was not less gratifying that it was an intelligent approval, showing that gentlemen were anxious to see their way clear before undertaking so great a responsibility. Mr. Schacht asked how it was to be carried out. In the resolution affirming the principle, very naturally no attempt had been made to bring out details. If the general principle was approved, Mr. Williams would move a resolution that a committee of ten pharmacists, representing different parts of the country, should be nominated to carry out the suggestion. He believed those names would have the confidence of the Conference whatever was the subject placed in their hands. As gentlemen had done good work in the past, he did not think good work in the future required a central laboratory, and an official staff. He was inclined to think that just as good an amount of work came from the private laboratory, and he did not find that many papers arrived from Bloomsbury Square. There would be a request for a very few pounds to pay the necessary expenses. One gentleman asked whether the year-book would not be superseded. The year-book brought to their notice the inconsistency of their present position, because it put side by side the various formulae for things which passed under the same name. An annual edition would certainly be desirable, the progress of elegant pharmacy necessitated it. Mr. Atkins really repeated Mr. Schacht's questions, and the same answer would apply to both gentlemen. Mr. Groves spoke of the necessity of inducing doctors to give up prescribing proprietary things, but the best way of securing that object was to provide them with good substitutes. Smith and Jones declared their elixirs cured everything, and the doctors not unnaturally fell in with them. The argument that in the step he pre-

posed they should take they were asserting their right to the national Pharmacopœia, was of course an implied one.

The resolution was carried *nemine contradicente*.

Mr. WILLIAMS remarked that Dr. Symes complained that nothing came of the action he took, but he (the speaker) was about to propose a motion which would give a tangible form to the present decision of the Conference. As to any arguments that might be used, Mr. Reynolds had gone into the matter so thoroughly that it was not necessary to say anything further. He had strongly supported the Pharmaceutical Society on a good many occasions, and they were carrying on researches and investigations in pharmacy proper. He thought the Society would very soon take up the matter seriously, and perhaps obtain good results. Surely the members of the Conference would not feel jealous of the Society. The resolution to which he referred was as follows:—"That the following, with power to add to their number, be a committee for compiling a formulary for non-official remedies, to report to the Executive Committee, and that the sum of 25*l*. be placed at their disposal for expenses"—this committee not having power to act except through the executive would save it from any charge of favouritism—"Messrs. Greenish, Groves, Martindale, Dr. Symes, Dr. Thresh, H. Martin, W. H. Naylor, Maben, Abraham, and Reynolds."

Mr. HAMPSON seconded the motion, remarking that the Pharmaceutical Society could help the Conference very much in the matter. If 25*l*. was not enough, they might very well apply to the Society for help. (No, no.) The Society would do a good work in helping them.

Dr. SYMES reminded the last speaker that the Council had no power to grant money to the Conference for any special work. He agreed with the motion, but should not join the committee if its object was to publish some little book which was to rob Mr. Martindale of the amount of labour which he had expended in the production of his book. Neither would he join it if the object was to rob some pharmacist of the amount of labour he had been put to in the preparation of some particular mixture. The object of the committee, however, would be not to imitate these preparations, but to indicate the way in which well-known preparations could be prepared and given a semi-official character to. They would be doing less harm than the private individuals who lived on other people's brains by attempting to imitate the results of their labours. The committee would be free from that sort of thing, for they would be doing a public work for the public good.

Mr. BARRON wished it was clearly stated what was meant by official and non-official preparations. Was the committee going to throw a light upon these preparations that pharmacists were called upon to use and dispense? The Americans were sucking their brains to the benefit of their pockets. They seemed to entertain the idea that sharp men were made to live upon fools.

The PRESIDENT expressed a hope that the use of the formulary, when put into action, might induce those who were not members of the Association to join it.

The motion was carried *nem. con.*

The following members had signed the attendance book up to mid-day on Wednesday:—

Alecock, F. H., Birmingham	Bennett, H., Kingston
Alden, J., London	Berry, W., Clifton
Allen, C. B., London	Bindloss, G. F., London
Allen, T., Ramsey	Blackwell, J., Birmingham
Allen, W. N., Dublin	Bland, T. F., Stourbridge
Armstrong, C. J., Birmingham	Blunt, T. P., Shrewsbury
Arkinwall, W., London	Bostock, W., Ashton-under-Lyne
Aston, W., Tarporley	Bourlas, J., London
Atkins, S. R., Salisbury	Bowen, J. W., London
Baldock, J. H., London	Bowen, W., Melbourne
Barclay, J., Birmingham	Brady, H. B., London
Farclay, T., Birmingham	Brassington, W. R., Moseley
Barrett, A. A., Birmingham	Brembridge, R., London
Barrett, E. H., Colchester	Brevitt, W. Y., Handsworth Wood
Farrett, J. F., Leamington	Burford, S. T., Leicester
Barron, W., Cheltenham	Butcher, T., Cheltenham
Barton, F., Ealsall Heath	Chase, T., Birmingham
Barton, H., St. Ives	Clark, J., York
Baxter, G., Chester	Clarke, F., London
Beil, C. B., Hull	Clayton, F. C., Birmingham
Benger, F. B., Manchester	Cocksedge, H. B., London

Conroy, M., Liverpool	Naylor, W. A. H., London
Crawshaw, E., London	Newbiggin, J. L., Alnwick
Crooke, C. G., Birmingham	Newsholme, G. T. W., Sheffield
Cross, W. G., Shrewsbury	Otley, T., Burton-on-Trent
Davies, J. T., Swansea	Padwick, J., Redhill
Drace, G. C., Oxford	Patchett, E. C., Nottingham
Duncan, W.,	Paterson, J., Aberdeen
Edison, J., Auckland, N.Z.	Payne, J. C. C., Belfast
Elborne, W., Manchester	Perry, G. E., Birmingham
Elliott, W. T., Birmingham	Plowman, S., London
Fairley, T., Leeds	Princep, P., London
Fletcher, F., Coventry	Pullin, W. H., Leamington
Forbes, J. W., Bilton	Ransom, F., Hitchin
Gerrard, A. W., London	Reynolds, R., Leeds
Gerrard, J., Bolton	Richardson, W. H., Dudley
Gibbons, T. G., Manchester	Richmond, R., Leighton Buzzard
Gibbs, R. D., Smethwick	Robinson, R. A., London
Goskar, J. J., Belfast	Rocke, H., Melbourne
Greenish, T., London	Sangster, A., London
Grose, N. M., Swansea	Savage, W. D. and Mrs., Brighton
Groves, R. H., Blamford	Schacht, G. F., Clifton
Groves, T. B., Weymouth	Scott, W. L. C., London
Hampson, R., London	Shackleton, G. W., Abergavenny
Harrison, J., Sunderland	Shenstone, J. C., Colchester
Hart, J., Manchester	Smith, D., Stroud
Hart, T., Stockport	Smith, F. J., London
Hillhouse, W., Birmingham	Smith, S. A., Leamington
Holmes, E. M., London	Southall, A., Birmingham
Homes, J. P., Oldbury	Southall, W. F., Birmingham
Howes, H., Birmingham	Spurway, F., Bournemouth
Huddleston, R. O., Manchester	Stafford, W., Gloucester
Hughes, J., Swansea	Stephens, J. B., Edinburgh
Hutton, H., Birmingham	Swain, C., Manchester
Ince, Jos., London	Symes, C., Liverpool
Johnson, T., Wigan	Symons, W. H., London
Jones, H. W., Coventry	Tatman, R., London
Keene, J. and Mrs., London	Taylor, G. S., London
Kemp, D. S., Bombay	Taylor, S., Birmingham
Kemp, H., Manchester	Thomas, W. J., Aberdeen
Kernot, C. N., Brighton, Calcutta	Thompson, C., Birmingham
King, W. G., Market Drayton	Thresh, J. C., Buxton
Kinniburgh, A., Glasgow	Tibben, W. A., Birmingham
Kirkby, W., Sheffield	Timen, H., Ceylon
Laird, G. H., Dundee	Umney, C., London
Leigh, M., Brighton	Ward, G., Leeds
Lister, T., Barnsley	Ward, J., Gloucester
Long, H., London	Ward, W., Sheffield
Maben, T., Hawick	Warren, W., London
MacEwan, P., London	Watson, T. D., London
Mackenzie, J., Edinburgh	Wells, W. F., Dublin
Madeley, E. S., London	Wheldon, J., Manchester
Maitland, P. C., London	Whitfield, J., Scarborough
Mann, G. F., Wells	Wild, J., Hyde
Martin, N. H., Newcastle	Williams, J., London
Martindale, W., London	Williams, T. H., London
Maskery, S., Liverpool	Willmott, W., London
Mason, W. B., Bolton	Woolley, G. S., Manchester
McGregor, D., Leith	Wootton, A. C., London
Meadows, H., Gloucester	Worfolk, G. W., Ilkley
Mitten, Flora, Hurstpierpoint	Worth, E., Bournemouth
Millhouse, H. H., London	Wright, T. R., London
Morris, J. O., Walsall	Wyley, W. F., Coventry
Moss, J., London	Young, R. F., Barnet
Munday, J., Cardiff	

## CONCLUDING BUSINESS.

### THE BELL AND HILLS TRUST.

Mr. PLOWMAN said that a number of books were placed on the table ready for presentation to the representatives of the Midland Counties Chemists' Association. There were also two given by Mr. Hanbury in memory of his brother, Mr. Daniel Hanbury.

The PRESIDENT, addressing Mr. Barclay, said he had great pleasure in presenting him with the books which the Hon. Secretary had enumerated. (Cheers.) The motto of Birmingham was "Forward," and he trusted that the books would help in forwarding the success of the students who might avail themselves of their valuable information. (Cheers.)

Mr. BARCLAY said that, on behalf of the Midland Counties Chemists' Association, he had great pleasure in accepting the valuable books which the President had offered to them. They should treasure them for many reasons. They would serve as a memento of the Conference's visit to Birmingham,



and he trusted that the books when used by their students would remind them of their great indebtedness to the members of the Pharmaceutical Conference. (Cheers.)

#### NEXT YEAR'S MEETING.

Mr. WOOLLEY (Manchester) afterwards invited the Conference to hold their next annual meeting in Manchester. He said that at a very representative meeting of pharmacists in Manchester and the district Mr. Benger and himself were deputed to offer a very cordial invitation to the Conference to visit that city next year. They were looking forward with great interest to the possibility of the Conference visiting Manchester, because they felt that such a visit would be a great honour to the town. They should do all in their power to make the visit agreeable and interesting. Manchester was not so happily situated as regarded its surroundings as some places which the Conference had visited during past years, still, they hoped to be able to show them something which might be possibly new to some and delightful to all. (Hear, hear.) There was ample material at Manchester to interest the members of the Conference, and they would come at a time when they should be engaged in celebrating the jubilee year of the Queen. (Cheers.) In connection with the event the citizens of Manchester were organising an exhibition, which promised to be of considerable importance, and would be interesting to every member of the Association. (Applause.)

Mr. BENDER said the hoped the Conference would favour Manchester with a visit next year. He had had the gratification of attending fifteen or sixteen meetings of the Conference, and of enjoying very many of the kindnesses and courtesies of local committees, and which had culminated in the Birmingham meeting. He could assure them that on visiting Manchester they would receive a most cordial reception. (Cheers.)

Mr. PLOWMAN moved that the invitation should be accepted.

Mr. REYNOLDS seconded, and the resolution was agreed to unanimously.

#### OFFICERS.

On the motion of Mr. REYNOLDS the various officers of the Association were elected as follows:—

PRESIDENT.	OTHER MEMBERS OF EXECUTIVE COMMITTEE.
S. R. ATKINS, Salisbury.	W. ELBORNE, Manchester.
VICE-PRESIDENTS.	A. W. GERRARD, F.C.S., London.
M. CARTEIGHE, F.I.C., F.C.S., London.	T. MABEN, Hawick.
S. PLOWMAN, F.R.C.S., London.	J. E. BRUNKE, M.A., Dublin.
C. SYMES, Ph.D., Liverpool.	R. H. DAVIES, F.I.C., F.C.S., London.
G. S. WOOLLEY, Manchester.	D. B. DOTT, F.R.S.E., Edinburgh.
TREASURER.	T. BARCLAY, Birmingham.
C. UMNEY, F.I.C., F.C.S., London.	M. CONROY, F.C.S., Liverpool.
HONORARY GENERAL SECRETARIES.	W. H. SYMONS, F.C.S., F.R.M.S. London.
J. C. THRESH, D.Sc., F.C.S., Buxton.	F. B. BENDER, F.C.S., Manchester.
W. A. H. NAYLOR, F.C.S., London.	AUDITORS.
	C. J. ARBLASTER, Birmingham.
	W. WILKINSON, Manchester.

#### VOTE OF THANKS.

Mr. SCHACHT said he had the greatest possible pleasure in proposing a vote of thanks to the local committee for their exertions, and especially to Messrs. Barclay, Thompson, Perry, and Arblaster, for the successful way in which the arrangements for the Birmingham visit had been made and carried out. (Cheers.) He could fairly say that he considered the result of the exertions of their friends in Birmingham had been as satisfactory—if not more so—in completeness than on any other occasion. (Cheers.) The local committee were to be congratulated on the manner in which they had carried out the departures from the old rules, and in having initiated a movement which would be doubtless imitated at future gatherings of the Association. (Cheers.)

Dr. SYMES seconded the resolution, which was unanimously agreed to.

Mr. BARCLAY, in replying, said that the thanks of the Conference were chiefly due to Mr. Thompson for the hearty way in which he had thrown himself into the work. With-

out his exertions the work could not have been carried forward to such a successful conclusion. He hoped that the Manchester committee would surpass them next year, which they doubtless would do after the experience they had derived at Birmingham. (Laughter and cheers.)

Mr. THOMPSON also replied. He said he should not be doing his duty if he were not to include other members of the committee. Many of the members of the committee had taken a very active interest in the proceedings, but they had been amply repaid by the enthusiasm which had been shown.

Mr. PERRY also briefly replied.

#### RESIGNATION OF MR. PLOWMAN.

The CHAIRMAN afterwards proposed: "That this meeting desires to place on record its sense of the invaluable services rendered by Mr. Sydney Plowman as hon. sec. for the last five years, and their great regret that he has found it necessary to relinquish the office." In doing so, he remarked that they were about to lose the services of one of their most valued members. Only those who had passed through the presidential chair during the last five years could understand the amount of energy which Mr. Plowman had thrown into the work of the Conference, and it was a matter of great regret that they were about to lose his services as hon. sec. (Cheers.)

Dr. THRESH said that, as Mr. Plowman's colleague, he desired to second the resolution. He had known him for a great many years, and the intimacy had been a very pleasurable one. No one knew the amount of labour Mr. Plowman had devoted to Conference matters—(hear, hear)—especially on the question of the Colonial and Indian business. When he became secretary they had only begun to think about that work, but through his (Mr. Plowman's) indefatigable exertions they had now representatives and members in India and the Colonies. (Cheers.)

The vote having been agreed to with acclamation,

Mr. PLOWMAN responded. He said he felt that the continued success of the Conference had been an ample reward for any of the efforts he had put forth. It was true what Dr. Thresh said, but the idea did not originate with him; he only carried out the details of the work. He left the active work of the Conference with a good conscience, because he found, on looking at some figures which had been placed in his hands, that they had 170 visitors at Liverpool, 168 at York, 175 at London, 176 at Glasgow, 186 at Southport; but the record showed 187 at Birmingham, which was the highest attendance they had ever had. (Cheers.) He felt that the future of the Conference was assured for many years to come; and it was only from pressure of other work that he had felt himself compelled to resign the appointment. (Applause.)

#### OTHER THANKS.

Mr. STEPHENSON afterward proposed: "That the hearty thanks of this meeting be given to the President and Council of the Masons College for granting the use of the Chemical Lecture Theatre, and to Professors Tilden and Hiltz for their valuable assistance in promoting the success of this meeting," and, in doing so, said that they were much better situated this year than they had ever been in his recollection.

Mr. MOSS seconded, and said that the arrangements had been typically perfect.

The resolution was cordially agreed to.

Mr. ALLEN (Dublin) proposed a vote of thanks to Messrs. Heaton & Sons and Messrs. Gillott for their kindness in allowing the members to inspect their works.

Mr. MABEN seconded, and the resolution was carried.

Mr. GROVES proposed: "That the best thanks of the Conference be accorded to the President for the able and courteous manner in which he has conducted the meetings of the Conference." (Cheers.) He remarked that he was well acquainted with the amount of labour required in holding the office of President, and he was sure the members would agree with him when he said that the President had discharged his duties with great efficiency. (Cheers.)

Mr. KEMP seconded, and said that the name of Mr. Greenish was deservedly held in esteem by pharmacists in all parts of the world, and so long as the Conference had such Presidents so long would its success be continued. (Cheers.)

The resolution was carried with great cheering.



The PRESIDENT, in replying, said he thanked them for the cordial manner in which they had received the resolution. The Conference had been one in which he had taken special interest, and for years it had been his pleasure to attend those annual gatherings. He had derived great benefit from doing so, and he should recommend those who attended the Conference for the first time to continue their attendance. (Hear, hear.) With regard to the ultimate success of the Conference he had not the slightest doubt. Year by year the Conference had increased not only in numbers but in usefulness. They had been having a higher class of papers; but he did not wish to see those higher class of papers if they were read to the exclusion of papers on purely pharmaceutical subjects. (Cheers.)

The Conference then terminated.

#### THE EXCURSION.

ON Thursday morning at 8.45, in miserably wet weather, over 160 members, their wives, and other lady friends, met at Snowhill Station, from whence a special train of first-class carriages conveyed them to Stratford-on-Avon, which was reached at 9.40. The local executive committee provided each member of the party with a copy of a guide-book drawn up by Mr. W. F. Wyley, vice-president of the Midland Counties Chemists' Association. The booklet contained brief descriptive and historical notes regarding the various places of interest which were visited during the day, and each one was illustrated by two cabinet-sized photographs thereof. It proved, like many other of the Birmingham arrangements, exceedingly useful.

Proceeding from the station, the party arrived at Holy Trinity Church in time for the morning service, after which a thorough inspection of the many objects of interest was made. It was in this church that Shakespeare was baptised, and here his remains lie, facts which are attested by the Church register, which was shown to the visitors.



THE CHURCH OF THE HOLY TRINITY.

This church is one of the oldest ecclesiastical edifices in England. Mr. Wyley's booklet states that the south aisle was rebuilt during the reign of Edward III., and further additions were made to it in 1465 and 1491. Lately it has undergone thorough restoration, and the interior is as substantial in appearance as it is interesting from numerous monumental erections within it. On the north side of the choir is placed the mural monument of Shakespeare, with his bust, under an arch, between two columns of black marble. The monument is believed to have been executed by Gerard Johnston, soon after the poet's death, and the bust is

regarded as one of the most authentic likenesses of the bard. This received much attention from the party, and a close inspection was also made of the seats in the choir, which are carved in many strange and amusing devices and forms. From our illustration it will be seen that the church stands on the banks of the Avon. It is approached through a short but picturesque avenue of lime-trees. From the church the party proceeded to the house in which Shakespeare was born. This building is situated in Henley Street. It appears that there is no doubt of this house having been the property of the poet's father, from whose family it passed into other hands, and was used for trade purposes until, twenty-five years ago, it was purchased by public subscription. The upper part of the house is that which interests the visitor most; there in the front room Shakespeare was born. The room has been



SHAKESPEARE'S BIRTHPLACE.

restored to its original condition, and signatures of illustrious men and women and unknown people cover the walls, ceiling, and the window-panes. The back room contains a fine portrait in oil of Shakespeare, of considerable age, and greatly resembling the likeness presented by the mural tablet. This portrait is securely kept in an iron safe, which fact is almost a proof of its authenticity and value. The house contains also in the rooms of the upper floor a museum of Shakespearian curiosities—rare editions of his works; amongst the more notable objects were the only letter addressed to him which exists and his chair. In the latter, it is almost needless to say, most members of the party sat for a second or two. After a careful inspection of all that was to be seen the party proceeded to the Memorial Theatre, which was erected in 1877, and from thence to New Place, whereon once stood the house in which the poet lived during his later years, and in which he died. We may state that Mr. Hawkes, pharmaceutical chemist, Stratford, personally conducted the party. The excursion was continued at 12.45 P.M. by train to Leamington, and proceeded at once by the principal street to the Town Hall, where luncheon was served in most sumptuous style. The hall was gaily decorated with flowers and shrubs, and a string band discoursed excellent music during luncheon. Mr. Councillor Barclay presided, and was supported by several local medical men and the principal pharmacists who attended the Conference. After luncheon and the loyal toasts, Mr. Atkins was called upon to propose "The Medical Profession," which he did in a brief speech, referring to the intimate and confidential relations between pharmacists and the medical profession. Dr. Wyer (Leamington) and Dr. Tibbets (Warwick) replied. The latter, in referring to the brotherhood which had existed between the medical profession and pharmacy, said that a great deal yet remained for pharmacists to do in discovering the grand secrets in chemistry for the purpose of furnishing new remedies. Dr. Thorn (Leamington), in proposing "the British Pharmaceutical Conference," made an amusing speech. He beseeched the members of the Conference not to go too far with discoveries, as there are by far too many new remedies. There was, he mentioned, not a single dispensing doctor in Leamington, a statement that was received with thunderous applause, which, however, was

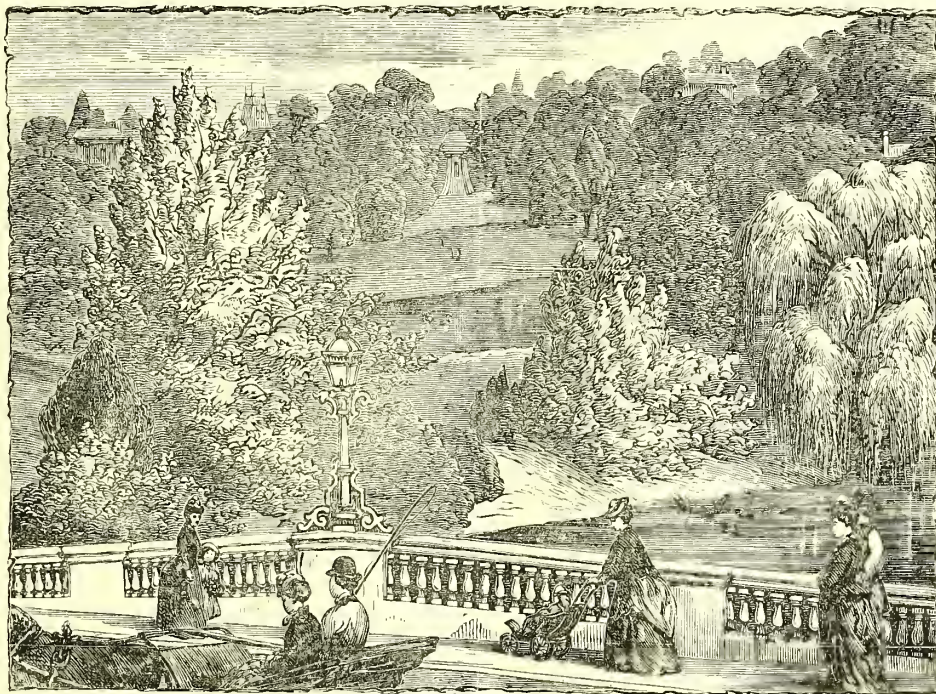


turned into laughter when he stated that he was sorry that he could not say that there was not a single prescribing druggist. Mr. Greenish replied, and thereafter Mr. Richard Reynolds proposed a hearty vote of thanks to the chemists of Leamington and district for their hospitality, and in doing so proposed the health of the Chairman, Mr. Smith (Leamington), Mr. Pullin (Leamington), Mr. Holiday (Warwick), and Mr. Charles Thompson, the honorary local secretary, who duly responded.

after the celebrated Dr. Jephson, and situated in the centre of the town, on the north bank of the river Leam.

The grounds are most artistically laid out, and are adorned with a statue of Jephson. At three o'clock the party proceeded in cabs and other vehicles through Stoneleigh Park to Kenilworth, where a thorough inspection of this famous ruin was made.

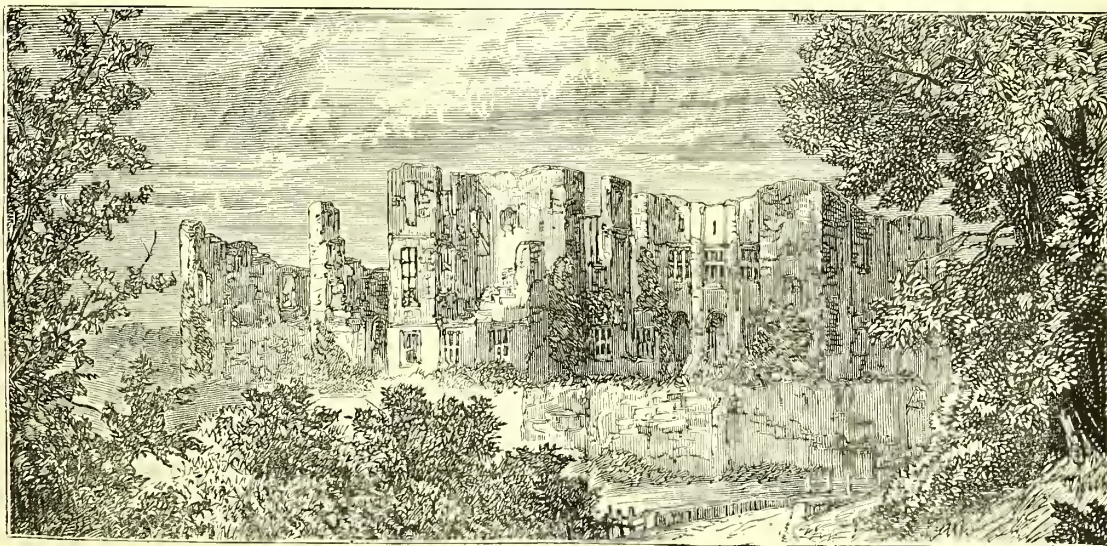
This Castle was founded about 1120, by Geoffrey de Clinton, who erected the keep known as Caesar's tower and part of



THE JEPHSON GARDENS.

Leamington, it is stated, in Mr. Wyley's guide-book is the prettiest and cleanest town in England, and is famous for its saline spring. The baths in connection with this are con-

the outer walls. While in the possession of the Crown, during the reign of Queen Elizabeth, that monarch granted it to the Earl of Leicester, in 1563, who added considerably to it.



KENILWORTH.

tained in a handsome and classic building, much more classic indeed than a curious old structure in Bath Street, called the "pump room."

Leamington is also famous for its Jephson Gardens, named

From Kenilworth the party returned, via Guy's Cliff and Warwick Castle, to Leamington, and reached Birmingham shortly after 8 o'clock. In spite of the wretched weather the excursion was most enjoyable, and the arrangements were perfect.



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## EDITORIAL NOTES.

### BRITISH PHARMACEUTICAL CONFERENCE.

FAVoured with fair but rather warm weather, the members of this Conference met in the Mason College, Birmingham, on Tuesday morning shortly before ten o'clock. About 140 members were then present, including several ladies. By half-past ten the Executive Committee had arrived at a very important decision regarding the publicity of the proceedings of the Conference, and when Mr. Greenish, surrounded by his colleagues on the executive, appeared on the platform, he was received with hearty applause. We elsewhere report the proceedings of the day. The programme of papers

consisted of twenty items, and many of the communications were of exceptional interest. That veteran pharmacist, Mr. John Williams, led the way with a practical paper on the preparation of CRYSTALLISED ACONITINE. We have already stated that Mr. Williams was opposed to the introduction of the crystallised alkaloid for medicinal purposes. Now, however, he appears to have changed his opinion. The process which he recommended consists of treating the coarsely-powdered root of *Aconitum napellus* with rectified spirit, 62 o.p., by maceration until exhausted, evaporating the percolate with as little heat as possible, and after treating the residue with hot water, the mixture is filtered to free it from resin. After washing the filtrate with ether to free it from fixed oil, it is treated with sodium carbonate, which precipitates the alkaloid in an amorphous condition. This amorphous mass appears to be a mixture, but when treated with ether the ethereal solution yields fine crystals of aconitine without difficulty. Although agreeing that only the crystallised aconitine should be used medicinally, Mr. Williams pointed out that it was important to insure that the crystals were the proper thing. His observations, and those of other investigators, went to prove that various products of an alkaloidal nature obtainable from aconitine roots may be taken for aconitine, yet differed from it materially. Some of these were described and figured on the blackboard. One of these especially, a star-shaped crystal, was obtained from aconitine which had been dissolved in nitric acid. He had also examined crystallised aconitines obtained by others, and found them to be very different from those which are obtained by the process described, and may also be different in physiological action. Mr. Groves, in opening the discussion on this paper, referred to Mr. Williams's conversion to the belief which he had advocated twenty years ago. It occasionally happens, he stated, that crystallised aconitine is obtained entirely destitute of poisonous properties. He had lately got a quantity of alkaloid in the course of manufacture which was a mixture of inert and toxic alkaloids; for the inert one he proposed the name of *picro*-aconitine, and he thought it resembled the non-poisonous alkaloid of *A. heterophyllum*. He referred to the difficulty of obtaining the root of true *Aconitum napellus*, and from this point the discussion which followed fell principally on the commercial supply. There are some twenty-four varieties of the napellus root, and a proposal which was made to have it determined which is the best and get that one cultivated on a commercial scale was favourably received. Mr. Long propounded an astonishing theory of repercolation, of which he is the sole author. This theory is, that if a percolate is passed through the marc a second time the marc takes in all the extractive matter again. This was the amusing part of the discussion, which was a very instructive one.

The next paper was on HYMENODICTYONINE, by Mr. Naylor. This alkaloid was discovered by Mr. Naylor, and the present report goes to confirm his former statement that it is a non-oxygenated base. Endeavours were made to produce iodine and bromine derivatives of the alkaloid. An ethereal solution of iodine was added to a similar solution of hymenodictyonine, when there resulted a varnish-like precipitate of an iodo compound, which repeated attempts failed to crystallise. Bromine solution also gave a precipitate of a bromo-derivative, but this always split up into pure bromine and the alkaloid in the course of purification. Subjected to the oxidising influence of potassium permanganate in presence of an acid, the alkaloid suffered decomposition, and the principal product after purification was ascertained to be a pyridine-mono-carboxylic acid ( $C_8H_7N \cdot COOH$ ), possessing the properties both of an acid and a base, and yielding pyri-



dine when distilled with lime. Non-oxygenated alkaloids, hitherto isolated behave similarly when so treated. Therefore it is beyond question that hymenodictyonine is to be ranked along with such alkaloids as conine and nicotine, as the author previously stated. In the brief discussion on this paper, Mr. Naylor mentioned that the alkaloid is now to be put on extensive trial as a remedial agent.

After an hour's adjournment for luncheon, Mr. Ransom commenced to read a paper by himself and Mr. Jones on the ESTIMATION OF ELATERIUM. There were then comparatively few members present, but the audience quickly swelled, and the reader was imperfectly heard in consequence. The paper proposed a method essentially the same as that already advocated by Mr. Jones and referred to in this Journal last week. The paper, however, gave very full working details, the special features being the determination of the solubility of elaterin in ether, and the stipulation that absolute ether only must be used in the process, which, it may be stated, yields elaterin nearly white. The authors of this paper were subjected to a brief cross-examination regarding the method which they had employed, and some others than those given in their paper were suggested, such as preliminary treatment with caustic potash or carbon bisulphide. It appeared, however, from the reply by Mr. Jones, that they were quite alive to all that was suggested, and had tried the processes and found them to be unsatisfactory. This led the President to make a pertinent remark, that if speakers would only turn up in time to hear the whole of the paper, they would be better prepared to speak on the subject.

Mr. Kirkby then read an abstract of his paper on A FALSE PAREIRA BRAVA. After a full description of the structure of the root of *Chondodendron tomentosum*, which has not previously been described, he contrasted with it the appearance of the false drug which has recently appeared in the market. This false pareira hails from West Africa, and Mr. Kirkby has determined it to be a mixture of various roots and stems, differing in appearance and structure from any that have hitherto been imported, and characterised by a large abundance of starch, and also by an internal yellow or yellowish-brown colour, externally a chocolate brown being predominant. This paper was acknowledged by the speakers to be one which must have entailed an immense amount of labour. This was graphically illustrated by Mr. Moss, who stated that when he had worked at this subject he had made some hundreds of sections for examination, and these had so tried his patience, that he was glad to forget his promise to take up another part of the subject at a future time. Mr. Moss also stated that false root is not so common in the market as was generally supposed, and he had not met with the kind with which the papers especially dealt.

Mr. Gerrard next read his paper on ULEXINE. The author reported that he had been able, by better manipulation, to obtain as much as 191 per cent. of alkaloid from the seed of furze, being an increase of 33 per cent. The bark and young tops also afforded an appreciable quantity of alkaloid, but the green tops which cattle eat contain only a very small amount, thus accounting for the harmlessness of this kind of fodder. Ulexine is distinguished from all other alkaloids by giving a deep red colour with ferric chloride; it presents other remarkable properties, being insoluble in anhydrous ether and soluble in its own weight of water. The author suggested for use in medicine a kind of purified fluid extract, or rather solution of the impure alkaloid—one ounce of which would be equal to one ounce of furze seed. Mr. Gerrard had also found in the furze a peculiar acid, for which he proposed the name "Europic Acid." The discussion on

this paper did not add anything to what the author stated in reference to the chemical constituents of the drug. A specimen of another ulex was shown, and there were some remarks on the distribution of that species throughout the country; but nothing practical was elicited as to whether it possesses the same property or not. The probability of ulexine being similar to or identical with sparteine was referred to by Mr. Alcock, and it seems desirable that in future experiments, whether chemical or physiological, some work in this direction should be initiated.

The next paper, on the fruit of *DAPHNIDIUM CUBEBA*, by Messrs. Braithwaite and Farr, was read in their absence by Mr. Umney. After describing the microscopic appearance of the drug, the authors detailed the result of a proximate analysis, which showed that the berries contain fixed and volatile oil, the former to the extent of over 20 per cent. The latter was yellow, resembling verbenal and lemon oils in odour, and is characteristically different from true cubeb oil in reactions. The drug also showed the presence of two alkaloids in small quantity (0.1 per cent.). The ethereal extract from which these were obtained caused vomiting and purging, such as samples of cubeb powders of doubtful origin have done. Several resins—two being of a glucosidal nature—and other constituents of less importance were found. Samples of the essential oil and salts of the alkaloids were exhibited, and Mr. Umney made a running commentary on the paper as he read it. The discussion which followed had reference mainly to the importation of so-called "spurious" drugs. Dr. Symes struck the key-note by appealing for a more charitable view of the matter, and he felt that parcels of new drugs were really sent into the market on trial. The fact that certain "spurious" articles were similar to genuine ones in appearance and origin led exporters to hope that they would be found to have similar uses. Consequently, it is the duty of those who receive such to get proper experiments made with them. This view was received with favour, but it is apparent, from what afterwards fell from Mr. Umney, it is a principle which may not be too widely applied, for such things as spurious cubebs only appear in the market when the genuine article is dear. The fact was also elicited that the pharmaceutically worthless cubeb stalks are used for distilling purposes, and that journalists get up sensational paragraphs on these little conveniences.

Mr. Alcock followed with his paper on *FERRI ET QUININÆ CITRAS*. As far as can be judged from the author's notes, commercial samples of the "B.P." preparation approach very closely to official requirements so far as alkaloidal value is concerned. Mr. Alcock made some very pertinent remarks on the presence of the sulphuric acid radicle in the citrate. It has been generally agreed that it is not possible to wash ferric hydrate entirely free from sulphate, but amounts exceeding 1 per cent. indicate carelessness on the part of manufacturers. The wholesale representatives had the best of it in the discussion which followed this paper, and they proved their case—which is, that there is no difficulty in getting a preparation of proper B.P. standard. Mr. Umney was particularly emphatic in his declaration that preparations containing less than 15 per cent. of quinine are not properly prepared, and are a disgrace to pharmacy; while Mr. Conroy, though agreeing with Mr. Umney, told the meeting the results of an examination of a number of samples of B.P. citrate, most of which were under the mark both in quinine content and purity. Curiously, these preparations were offered by pushing firms, who gave special inducement as to low price. This concluded the first day's business.

The proceedings on Wednesday commenced with a long

and interesting paper on the CORRELATION OF STUDY IN BOTANY AND MATERIA MEDICA, which was admirably read by the author, Professor Hillhouse, of the Mason College. The arguments set forth were based in a great measure on the requirements of the medical student, but Professor Hillhouse struck a chord of sympathy with a section of his audience in declaring that pharmacy is a part of the medical profession. The paper was intended as the basis of an arrangement for future consideration, and the subjects advanced were (1) a thorough training in pharmacognosy, pharmacogenesis, pharmacy, posology, and therapeutics; and (2) a comprehensive course of histological work. The author regretted the abolition of botanical studies by some medical qualifying bodies, and this was taken as the key-note by some of the speakers who followed. Dr. Trimen—the well-known botanist—could not agree with Mr. Hillhouse regarding medical botanical studies, and gave a forcible illustration of the inefficient manner in which botany was taught in London twenty years ago. It was pointed out in the course of the discussion that bad results hitherto were due to the want of systematic and practical teaching, pharmacy apparently being as bad in this respect as medicine. From what the chairman said, however, it appears that we shall by-and-by get all that is required in the research laboratory of the Pharmaceutical Society.

Then followed a very important part of the proceedings of the Conference, viz. the motion by Mr. Reynolds for a committee to draw up a formulary of non-official preparations. The motion was based upon the remarks of the President in his address. A long discussion followed. It was by no means forced, in fact it was rather spontaneous, and the President's tact was fully brought into use in deciding who should speak when several at a time rose to address the meeting. There was no question about the meaning of the motion, yet there seemed some doubt as to its scope. Dr. Symes, who was the first speaker after the seconder, dexterously turned the debate for a short time in the direction of formulae for such non-official preparations as tincture of *strophanthus*, and showed that the proposal was by no means a new thing, as he had previously proposed that all preparations of new drugs should be semi-officialised as soon as possible after introduction. He also supported the proposal, which was lately made in these columns, that the Conference should associate itself in this matter with the Committee of the British Medical Association. Mr. Martindale was of a similar opinion, and offered to give the committee all assistance in his power. Some doubt was then expressed by ardent supporters of the Pharmaceutical Society as to the Conference being capable of undertaking this important work, and several speakers gave forcible expression of their opinion anent proprietary preparations. One section pointed out that it would not be quite fair to imitate preparations which had been honestly and skilfully devised by experts, while another section advocated authoritative formulae for such inhabitants of the "Chamber of Horrors" as Fellows's Syrup and Liquor Pepticus. Ultimately, after a fair expression of opinion, the resolution was adopted and an influential committee was appointed.

Mr. N. H. Martin then read an abstract of his paper on the PREPARATIONS OF *NUX VOMICA*. He had found a large number of commercial specimens of the tincture to vary as much now as before the tincture was officially standardised. Tinctures prepared by the old process are still sent out, and many of those by the new process contain an excessive amount of alkaloids. This latter bad feature was traced to the nature of the standardised extract, which loses moisture by keeping, and therefore becomes much more potent. In the discussion it was pointed out that the proper plan of standardising should have been to make a strong tincture and

standardise it; and it was generally agreed that the B.P. methods will require revision at an early date.

The next paper was on the PRESERVATION OF ETHYL NITRITE, by Mr. Williams. He showed that a solution of anhydrous nitrous ether gas could be well preserved in a mixture of glycerine and absolute alcohol, and showed practically how solutions containing 5 per cent. and upwards of nitrous ether effervesced with water, owing to escape of the ether. An interesting discussion followed, and Mr. Williams pointed out that he did not propose the addition of glycerine to spirit of nitrous ether as a preservative; for that purpose it would have no effect.

The members then adjourned for luncheon, after which Mr. Ransom read his paper on BELLADONNA LINIMENT, which was one of the most practical papers of the meeting. One important fact brought out was that by using a much coarser powder than is directed in the Pharmacopoeia, and a third more spirit, a stronger preparation was obtained, and a considerable saving of spirit effected. It was also pointed out that the official process only extracts 70 per cent. of the available alkaloid, thus confirming Mr. Umney's statement, as, indeed, the whole paper does. Some time ago Mr. Holmes, in a discussion on a paper by this author and Mr. Dunstan, pointed out that the commercial belladonna root varies very much as to quality; but Mr. Dunstan stated that it was not so. Now, however, Mr. Ransom gives an opposite opinion, and attributes great variation in the alkaloidal value of commercial liniments to that cause in great part, and he recommends that the liniment should be made from a standardised extract. The subject proper of the paper received little attention during the discussion which followed, but many useful and practical comments were made on the degree of comminution dictated by the Pharmacopoeia, opinion being against it, and Professor Redwood's definition of what a numbered powder should be was disparaged because it would often exclude the most active portion of a drug. For example, *ipeacacanha*, the cortical portion of which is generally obtained in comparatively fine powder.

Mr. Moss then read a paper on SALOL. This new antiseptic is prepared from carbolic and salicylic acids, and contains the latter acid and the radicle phenyl in combination, but does not give the chemical reactions of either of these bodies. In studying the properties of salol, Mr. Moss observed that when it was treated with caustic soda and afterwards super-saturated with an acid, a distinct odour of phenol was observable; also that the violet coloration with ferric chloride was afforded by the neutralised alkaline solution. These results, which were repeatedly confirmed, show that salol is decomposed by an alkali, and lead Mr. Moss to dispute the statement by Professor Von Nencki, that salol is decomposed in the duodenum by the pancreatic ferment. Mr. Moss also observed that digestion with saliva decomposes salol. He therefore concludes that it is the contained alkali and not the ferment of the pancreatic juice which brings about the resolution of this new antipyretic. Obviously it passes through the stomach undecomposed because the gastric juice is acid. The preparation of salol was referred to. The author had tried to produce it by dissolving salicylic acid in excess of phenol, but the former did not wholly combine; he therefore suggested that a more rational method for its preparation would be to pass a stream of hydrochloric acid into the mixture of salicylate and phenyl of sodium, which exists at the mid-stage of the manufacture of salicylic acid. The question as to whether salol is salicylate of phenyl or phenyl salicylic acid was briefly discussed, and the papers concluded by reference to the phenyl content and the dosage. In the course of the discussion Professor Armstrong



pointed out that it would not be possible to prepare salol, as was suggested by treating the midway product in the manufacture of salicylic acid with a mineral acid, because that product is a basic salicylate and not a mixture of carbolate and phenate.

The next papers were reports on the "pure terebenes" of commerce. Mr. Scott read his paper, and the other by Mr. Hodgkin was read by Dr. Thresh. The former stated that he had found nearly all the "pure terebene" in the market to be impure; Mr. Hodgkin dealt chiefly with the difficulty which is experienced in preparing this article twice alike, owing to the variable nature of turpentine. From examination of various "terebenes" with the polarimeter and other methods, he was led to the belief that they show variation equal with turpentine. An amusing and interesting discussion followed, which was taken part in by Professors Tilden and Armstrong and Dr. Meymott Tidy. Dr. Tilden explained that there was no such thing as pure terebene, that that body was a mixture of several, and suggested that therapeutists should experiment with such bodies only as are uniform chemically. This led to an explanation regarding the term "pure terebene," for which Mr. Martindale is responsible, and Dr. Tidy caused some amusement by the remark that he had found most benefit arising from "pure terebene" which contained most impurity.

Mr. Jones followed with his paper on the ESTIMATION OF EMETINE. For estimating the alkaloidal value of the root, the author finds no better process than that of Flückiger. The ammoniacal chloroform used in that process exhausts the drug thoroughly, and the alkaloid is obtained remarkably pure, although any fatty matter with which the drug may be contaminated is apt to impair the results slightly. One sample of powdered ipecacuanha which Mr. Jones examined afforded an alkaloidal residue, of which 6 per cent. was insoluble fatty matter, which no doubt had been mixed with the drug in the course of grinding. The lime process of Flückiger gave similar results, but the process was much more troublesome to carry out. It is, however, recommended for estimating the value of the preparations of ipecacuanha, and the volumetric method (with Meyer's solution) is condemned because the results are never twice alike, owing to the presence of extractive matter.

Mr. J. C. Shenstone then read a paper on IPECACUANHA WINE. The author had found that the new wine deposits as much as the old, and had traced the deposition to the wine employed. He had analysed various wines, and as the result thereof, as well as from extensive experiments with the preparation, came to the conclusion that the only way out of the difficulty is to use an artificial wine free from tannin. The comments on the two papers were taken together, but were confined to Mr. Shenstone's. Messrs. Martindale and Conroy considered the new preparation quite satisfactory, the latter stating that it was always so if the root is not powdered.

By this time the hour for closing was fast approaching, when Mr. Plowman stated that Dr. Symes had more than a week previously promised a paper, and the fact was not duly notified to the Executive Committee. The paper could not therefore, be read unless the meeting expressed a wish to hear it. This rather nonplussed the members, and as much time was consumed in talk as would have served for reading the paper. Ultimately, after this amusing interval and a show of hands, Dr. Symes was allowed to proceed. He explained that he had been asked by the President to contribute a paper, and that which he had prepared was on AMERICAN MUSK, which was derived from the beaver which inhabits the lake districts of the United States and Canada. The perfume resided in a sac derived from the male animal, and from

experiments he had ascertained that the odoriferous body was associated with the tissue. He gave several formulae for perfumes, but stated that American musk is far from capable of replacing ordinary musk.

The rest of the papers were read in the briefest possible abstract. Mr. Dott contributed a note on the VOLATILITY OF IODOFORM. Previously the author has stated that the loss of iodoform by evaporation at the temperature of a water-bath is 6.7 per cent.; but this has been contradicted by Dr. Vulpius. Mr. Dott has repeated his experiments, and finds 6.68 per cent., practically corroborating his previous statement. At the same time he criticises some of Dr. Vulpius's observations, and points out that this is a subject which cannot be wrought out with scientific precision. Next were read two papers on quinological subjects. Mr. Hooper's paper dealt with experiments in Madras. He showed that renewal by shaving greatly increased the quinine value of the bark, and that manuring has a somewhat similar effect in a less degree. The paper also contained details of analyses of barks at different ages, and concluded with a reference to the effect of mould on bark, which is almost nil. Mr. Howard's paper was one of considerable interest, and contained the results of many analyses of various cinchona barks, all of which, contrasted with a review of what was being done in cultivation of the bark, led him to predict that profitable cultivation can only result from the propagation of the highest quinine-yielding trees. Another paper by Mr. Dott was on COMPOUND SPIRIT OF ETHER. This referred to the extravagant process of the Pharmacopœia, which he considered one which would not commend itself to learned pharmacologists, and gave his reasons for saying so, these being what we indicated a fortnight ago. This concluded the series of scientific communications to the Conference, and the members at once proceeded to render hearty thanks for past favours, and to make arrangements for the future, which now appears as bright as it has been at any period of the Association's history.

## THE NEW EDUCATIONAL SCHEME.

THE fantastic scheme proposed by the President of the British Pharmaceutical Conference for flooding the provinces with pharmaceutical instruction and defacing the map of Great Britain, can claim little beyond respectful burial. The introduction of illustrations into a presidential address seemed such a hopeful innovation that we heartily regret to have to comment upon it unfavourably; but, with the utmost desire to support the chair, we find ourselves quite unable to appreciate either the solemnity of the danger which it appears is threatening us or the sudden necessity for a remedy which so recklessly transcends and transgresses the ordinarily recognised laws of social economy.

According to Mr. Greenish, the still unsatisfactory and inadequate provision for pharmaceutical education in the provinces "demands immediate attention." Mr. Greenish is a man who weighs his words, and he assuredly puts forward his suggestions in all seriousness. But he gives no reason for his assertion of the pressing nature of the case except by reminding us that, while more than 800 candidates present themselves annually for the Minor examination, less than 400 pass. But before it can be admitted that these statistics justify the importance attributed to them it is necessary to show that these 400 new chemists and druggists every year are not enough to do the work of British pharmacy. Is Mr. Greenish prepared to maintain that proposition? Or would he rather agree with the other Mr. Greenish, who had declared only ten minutes previously that "except in some of the centres and the more important

provincial towns pharmacy has no existence for pharmacists?" If it be the fact that "the very soul of pharmacy is being taken out of those who are ostensibly engaged in its practice, and whose legitimate calling it undoubtedly is," how does it become a matter of such urgency to drag into the ranks the 400 or 500 young men who are now kept back from the struggle for the few remaining crumbs?

But if we were to grant that the present supply of pharmaceutical practitioners is not sufficient to meet the needs of the public, and that 800 new competitors annually would be better than 400, we should hardly follow Mr. Greenish's next step. "The question then arises," says the President, "how should committees of organisation be constituted?" The question that arises in our minds is, Why should committees of organisation be constituted by chemists at all? If the public want 400 more pharmacists per annum, let the public pay for the better education of these failures if the poor things cannot pay for their own education. But the introduction of charity into such a business at all is utterly out of place. Young men who start on a pharmaceutical career are not paupers, nor are they commencing a missionary enterprise for the benefit of their fellow-creatures which would make it reasonable to beg for public support. But even if we could have agreed with Mr. Greenish up to this point, we could have followed him no longer. Did anyone ever hear of such cumbrous machinery as is suggested for accomplishing such a result? The object aimed at is to get about 400 youths through the Minor examination of the Pharmaceutical Society. To attain this end 350 local secretaries of the Pharmaceutical Society are to be organised into fifteen committees. Each man may spend a pound on railway travelling, and each committee may spend 20*l.* a year; that is to say, that roughly one local secretary and two sovereigns are to be contributed for each of these incompetent and perhaps lazy youths. We fail to see the reasonableness.

What is to be the special business of the famous "twenty-ones" after they have made themselves into presidents and vice-presidents, and so on, is still not clear. Existing university or college teaching is to be utilised as far as possible. Well, it can be utilised at present. They are to negotiate for the establishment of suitable courses of lectures when no college teaching is to be had. But why cannot the people who want the teaching negotiate for it? Where the carcase is there will the eagles be, and where there are students it is no trouble generally to find teachers. As a lesson in geography this section of the Presidential address may have been useful, and the maps as divided can be profitably utilised by the advocates of territorial representation on the Pharmaceutical Council; but the scheme which they were drawn to illustrate appears to us to have only the advantage of exhibiting more forcibly than it has been shown previously the state of ecstasy which can be produced when pharmacy is treated rather as a religion than as a business.

### GENESIS OF THE ELEMENTS.

THE address of the president of the chemical section of the British Association, delivered on Thursday, was one of the most striking and successful of the orations which have been given in that section by the eminent men of chemical science. In the course of his address Mr. Crookes carried his large and appreciative audience to the borderland of the Unseen, and they seemed to get a glimpse of what is beyond the ken of mortals. The lecturer's text was the Genesis of the Elements; fortunately he said little about the creation of matter, so that his audience was relieved of a

large amount of what is still, and may ever remain, speculative, and at the same time a semblance of reality was imparted to the daring hypotheses which the lecturer put forward.

Chemists are fairly agreed that some day they will succeed in demonstrating that the elements are compound bodies. Past experience does not show that the number of elementary bodies, so called, has decreased—it is rather the opposite; but there are examples enough of bodies which were supposed to be elementary, which have been proved to be compound; and there are also radicles of a compound nature which, although known to be groups of many atoms, have properties very similar to those exhibited by elements. These latter are considered to combine and undergo other natural phenomena without change of atomic arrangement, so that they may by suitable means be relieved from combination entirely unaltered. Certain compound bodies, such as ammonia in the inorganic, and cyanogen in the organic divisions of substances, behave similarly, and the assumption that other bodies, such as sodium and carbon, are compound is not the wild speculation which at first sight it may appear to be. We have said that elementary bodies may be withdrawn from combination in a condition analogous to that which they presented before combination. It must not be assumed, however, that all the elements are unchangeable or always present the same characteristics. Several of them exist in very different forms: carbon and sulphur in three, oxygen and phosphorus in two. Are these allotropic forms merely the result of changed molecular arrangement, as in the case of ozone, or is each atom made up of smaller particles, definitely and differently arranged in the different conditions? On a very much broader basis Mr. Crookes attacked the subject. After a graphic rehearsal of the opinions and work of other physicists in this mystic corner of science, he propounded the theory that all the elementary bodies are derived from one source, viz., from an original primal matter, for which he coins the term *protyle*. This protyle existed in the ultra-gaseous state at a temperature far exceeding anything which can be imagined. Indeed Mr. Crookes says that it is scarcely conceivable to associate temperature with protyle. The description of the genesis of the elements from protyle was exceptionally brilliant. Contrasting its condition to that of the nebulae, he pictured a first period of condensation, during which an element composed of aggregated particles of protyle was born. This in the first instance may have been hydrogen, or perhaps something midway between hydrogen and protyle, viz., the hypothetical negative element helium. Following the birth of hydrogen there was, it is conjectured, a period of repose, during which the evolution of the next element would be going on, and so on until the whole array of the known elements would be created, each being composed of protyle. The groups of elements which present very similar characteristics (such as iron, nickel, and cobalt) would be created in sequence at short and sharp intervals, so that they would resemble each other, according as their conditions of genesis were nearly alike; but from long periods of repose were evolved elements (such as hydrogen and lithium) which are remotely alike. Meanwhile other elements were born, but, like their congeners in the organic world, they have been unable to survive the changing conditions of time, and thus there are left gaps in the scale of periodicity which will never be filled.

Another bold hypothesis put forward by Mr. Crookes relates to the atomicity of the elements. The hypothesis is based on the spectra, and more directly on that of the earth yttria, which Mr. Crookes has specially studied. Under various conditions this earth affords different spectra; altogether six bands are observable, but when infinitesimal traces



of yttria are present one band only is seen. Moreover, samples of pure yttria from different sources, but in all respects chemically the same, afford different spectra, and this is explained on the assumption that all the atoms are not of the same weight, and that each according to its weight gives one well-defined band in the spectrum. Similar phenomena will, he believes, be found to be the case with all the elements. "For example, the seven series of bands in the absorption spectrum of iodine may prove not all to emanate from every molecule, but that some of these molecules emit some of these series, others others, and in the jumble of all these kinds of molecules, to which is given the name 'iodine vapour,' the whole seven series are contributors." This explanation of different luminous properties naturally leads to the inference that that difference may be associated with difference in actual weights of the atoms of an element. "When we say the atomic weight of, for instance, calcium, is 40, we really express the fact that, while the majority of calcium atoms have an actual atomic weight of 40, there are not a few which are represented by 39 or 41, a less number by 38 or 42, and so on." There is a boldness about these speculations which alone will draw considerable attention. Apart from that it is important to keep in mind that weight is added to them by the fact that Mr. Crookes's life-work is spectrum analysis. This study has a value far exceeding any other branch of chemical physics for the elucidation of the hidden properties of matter, for the conditions of observation more than any other resemble those which existed prior to or coincident with the genesis of the elements.



### AND Literary Notes.

*Materia Medica: a Manual for the Use of Students.* By Isambard Owen, M.D., F.R.C.P. Second edition. London: J. & A. Churchill, 11 New Burlington Street. 1886. Pp. viii. + 228. Crown 8vo. 6s.

This manual is what it is intended to be—a supplement to larger and more exhaustive works. This it is in virtue of the fact that it is a concise and systematic *résumé* of important facts such as the student meets with in the course of reading or in the lecture-room. There is no pretension to its being a cram-book—rather the opposite, for the author expressly states that it is not a substitute for larger works. Nevertheless, it is a book which will be chiefly valuable to the student preparing for examination, because it presents in a systematic, and therefore memory-aiding, manner the facts which it is important to recollect in the examination-room.

The arrangement of the matter is in some respects peculiar and original. The aim of the author is to bring drugs and preparations of a kind together, so that comment upon them may be general, thus leaving only the most important for special comment. After a concise analysis of the drugs and preparations of the Pharmacopœia, in which special attention is given to grouping them according to their uses, they are again considered more fully in three sections, viz.: (1) Drugs furnished by the animal kingdom; (2) by the vegetable kingdom; and (3) minerals and products of manufacture. The sections are further divided into groups, without reference, in the case of the first two, to natural orders. For example, vegetable drugs are divided into twenty-one groups, such drugs as flowers, fruits, volatile oils, and balsams constituting groups by themselves. In the case of such groups as the oils, which require definition of their chemical nature, the chapter devoted to them is preceded by a concise account of their characters. Thus, volatile oils are pre-

ceded by a page of useful notes, from which we quote the following:—

"The volatile oils of plants consist of hydrocarbons, or of mixtures of hydrocarbons with oxygenated derivatives, and in some cases of the oxygenated compounds alone. Either a *terpene*,  $C_{10}H_{16}$ , or a hydrocarbon of the composition  $C_{15}H_{24}$ , enters into the constitution of nearly all.

"Oils of turpentine, Scotch fir, savin, and copaiba consist purely of terpenes.

"Oils of caraway, cajuput, chamomile, lavender, spearmint, peppermint, and rue are mixtures of terpenes with oxygenated compounds.

"Oil of mustard differs widely from all the rest, being *allylic sulphocyanide*,  $C_3H_7CNS$ . It is not a naturally-existing oil, but, in a sense, an artificial product.

"Volatile oils can be distilled without decomposition, and volatilise at ordinary temperatures, their vapours being powerfully odorous."

The characters of each drug are briefly described, the botanical origin and habitat given, and where necessary active principles and their characters described. In connection with the botanical origin, it may be noted that the author begins all specific names with a capital letter; for example, *Myristica Fragrans*, *Brassica Alba*, &c. This is a distinct blemish, and is apt to lead the student into the habit of writing the specific terms indifferently. At the end of each group is a list of preparations with brief descriptions of their contents. The second section also includes a full botanical synopsis of the natural orders, with the geographical sources of the drugs, and their preparations.

Section III., comprising minerals and manufactured products, is divided into six groups. Here again the author largely uses the tabular system of statement, which is a great aid to the student in impressing facts upon the memory. Care is taken to contrast and differentiate all substances which are of a similar chemical nature. This part of the book is characterised by full description of the substances, their composition and manufacture. There are many interesting notes, and, as decompositions in process of manufacture are explained in the text, equations find their proper place as footnotes.

Following this section are various useful chapters, such as a synopsis of the compound preparations of the Pharmacopœia, synopsis of doses, and a valuable chapter of notes on the medicinal uses of drugs, adapted to the requirements of medical examining boards which include the subject in their primary examinations in materia medica. Though written specially for medical students, and having in consequence little detailed information regarding pharmaceutical operations, the manual is in other respects such as will prove serviceable to the pharmaceutical student. Its small size, which is in its favour, is attained altogether by the use of small type and methodical arrangement.

*Reports on Insects Injurious to Fruit Crops.* Prepared for the Agricultural Department, Privy Council Office. London: Eyre & Spottiswoode. Pp. 113. 7½d.

WE have already noticed two previous issues of these Government Reports, relating respectively to the insects affecting the hop and corn crops. The new publication is likely to be the one most generally popular, as private persons all over the country as well as fruit farmers are concerned about the insects which ravage fruit-trees. The Privy Council have done useful service in having this work prepared. In it Mr. Whitehead has compiled in a fairly popular style as much as has been ascertained concerning the nature and life histories of the weevils, moths, bugs, and flies which are so ruinous to our various fruit-trees. The pamphlet is obtainable for so little cost that it is not necessary to analyse its contents at great length. We may, however, state that about thirty of the most familiar garden insects are figured and discussed. These include the chief devastators of the apple, pear, cherry, currant, raspberry, strawberry, and gooseberry leaves and blossoms. The details given under the heads Prevention and Remedies show that no royal means have yet been discovered for battling with these foes without a great deal of trouble. Some different details of treatment are suggested for each insect, but generally it is recommended that the trees or bushes infected should be well syringed with a

mixture of soft soap (7 lbs.) and quassia (6 lbs.) to 100 gallons of water. After an attack the ground round the roots is generally to be well hoed, quicklined, or sawdust with paraffine, or soot, or ashes well mixed in with the earth, and all cuttings from the tree to be perfectly cleared away. Helio-bore is said to be an effectual dressing in some cases, but its poisonous nature forbids its use when any fruit, however small, is forming. It is much the fashion to attribute the attacks of insects to the east wind, as if it in some mysterious manner were the actual generator of sundry of the species which spoil the crops and destroy vegetation, or as if they literally came on the wings of the wind. Mr. Whitehead notices this old-fashioned theory, and attributes it to the fact that after a cold and variable spring, during which there has been an unusual amount of east wind, all plants, trees, and herbs appear to be more liable to attacks from insects, in consequence of certain chemical changes and the disorganisation of tissues rendering them more grateful to the tastes of their ordinary parasites.

*The Life and Labours of John Mercer, F.R.S. F.C.S., etc., the Self-taught Chemical Philosopher.* By Edward A. Parnell, F.C.S. London: Longmans, Green & Co. Pp. 342. 7s. 6d.

JOHN MERCER died just about twenty years ago, and it cannot be said that he attained any wide-spread fame; nevertheless, his biographer has fully justified the task he had undertaken in writing a memoir of him. Mercer's life was worthy to be recorded, not merely because it was the life of a man who raised himself from a very humble position to one of some degree of wealth and honour, but especially because throughout his career the evidences of unselfishness and a desire to serve his generation are always manifest. Free from the vulgarity and self-obtusiveness which sometimes characterise men who have successfully pushed their way, Mercer lacked none of the grit which accounts for the solid success of such men. Born near Blackburn, in 1791, the son of a small farmer, John Mercer lost his father when he was nine years of age, before he had received any schooling, and he forthwith had to commence the serious work of life, his first occupation being that of a "bobbin-winder," which was soon exchanged for that of a hand-loom weaver. At the age of ten an acquaintance gave him some instruction in reading, writing, and arithmetic, of which he took such advantage as to lay the foundation of a sound and serviceable education. Music, too, fascinated him, and his natural talent with his flute saved him from disgrace for awkwardness in the militia regiment in which he was compelled to serve, transferring him from the awkward squad to the band, and in his later years brought him regularly to London to attend the Handel Festivals at the Crystal Palace.

When he was sixteen he puzzled himself about the secrets of dyeing and calico-printing. Utterly ignorant of the arts he set off to Blackburn to learn about them, and there he visited a druggist's shop. "What do you want?" inquired the shopman. "I can't tell you," replied John; "will you tell me the names of all the different materials you sell the dyers here?" "Oh, I sell them peachwood, logwood, quercitron, alum, copperas," and others, mentioning their names. John bought threepennyworth of each and took them home. Starting with these, and with only his own shrewdness to guide him, he acquired by patient experiment and labour a good practical acquaintance with the art of dyeing, and at this business he began to make money by buying some of the waste materials from the dye-works at low prices, and utilising them in his own business. At the age of twenty-three he married, and visiting Blackburn to buy the marriage licence, he stopped at a second-hand bookstall and made several purchases. Among the books he bought was "The Chemical Pocket Book, or Memoranda Chemica arranged in a Compendium of Chemistry by James Parkinson, of Hoxton, 1803." From this book he acquired his first knowledge of the science of chemistry. The book introduced him, he said, to a new world; he devoured it, and assimilated the knowledge it conveyed, and this he immediately applied to his lifework. The first result of his chemical experiments was the application of the golden sulphide of antimony to calico-printing. This discovery proved of much commercial value, but the firm to whom he explained it and who used it with profitable results made him

no pecuniary acknowledgment. He was, however, engaged about that time by Messrs. Fort, of the Oakenshaw Print-works, as experimental chemist in their colour-shop at a salary of 30s. per week, and in that capacity his inventive genius and the application of chemical knowledge to the introduction of new styles and to the utilisation of waste or economising of processes seemed inexhaustible. A French calico of madder purple with a bright yellow discharge was introduced and excited much curiosity. Mercer tested it, found the yellow to be a chromate of lead, and by patient experiments traced out the plan of producing it. At that time bichromate of potash was sold at 8s. per lb., but Mercer's new colour became popular, the chemical came into demand, and its price became reduced to more like its true commercial value. Numerous applications of manganese, adapted originally from the use of preparations of the metal in earthenware glaze, were among Mercer's early successes, and these were followed up by many others, all indicating the keen apprehension of chemistry and the thorough soundness of his knowledge. In 1825 Mercer became a partner in the firm in which he was employed, and ultimately became the sole proprietor.

Apart from the general interest of the memoir, this book is of special value for the history it gives of the progress of the art of calico-printing as illustrated by Mercer's inventions. The formulae are given in detail, and these include many not previously published. Besides the observations applying particularly to his own branch of chemistry, Mercer made important experiments in other directions. He anticipated Dumas in the explanation of the chemical character of white indigo, studied closely the composition of bleaching powder before scientific chemists had given much attention to the subject, and contributed various contributions of much value to the British Association. Indeed, there is little doubt that he would have been an eminent man of science if he had not been such a busy practical man. Among other processes outside dyeing which were the result of his experiments was one for preparing artificial magnetic oxide of iron, which became popular with some eminent prescribers, and another for bleaching palm oil. Mr. Parnell has evidently aimed to give in a concise form not only a respectful tribute to the memory of an honourable worker, but also, as far as could be traced, a compendium of his researches suited for other labourers in the same and parallel lines, and in both directions we think he has succeeded admirably.

#### TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications relating to patents, designs, or trade-marks to be addressed to H. Reader Lack, Esq., Comptroller-General of Patents, Designs, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "*Trade Marks Journal*," September 1, 1886.

"ADSHEAD'S BRIGHT METAL PASTE;" for a polishing paste. W. P. Adshead & Co., Belper, Derbyshire. 45,619.

"HOLLYCREAM," oblong fancy label with arabesque border; for a preparation for the skin. R. Willan, Ulverston. 51,241.

"TUCK'S FEMALE MIXTURE;" for a medicine. H. Tuck, 73 Chatsworth Road, Clapton Park, E. 52,423.

"ANTI-CURD MIXTURE," words and representation of sheep; for a sheep medicine. W. Smyth (trading as Ball & Co.), 47 North King Street, Dublin. 52,433.

"VITONIC;" for a patent medicine. Johnson Bros., 93 Wellington Road, Leeds. 52,428.

"ALPINE TONIC," words across shield, surmounted by flying eagle; for a medicine. W. Neats, 2 Railway Approach, London Bridge, S.E. 52,593.



"**RACKHAM'S DOG MEDICINES**," with representation of four dogs. Geo. Ringer (trading as Rackham & Co.), Upper Goat Lane, Norwich. 52,949.

Square label, with representation of sphinx; for paints, varnishes, and chemicals. Jas. Galbraith & Son, 6 Waterloo Street, Glasgow. 53,542.

"**DUNN'S FRUIT SALT BAKING POWDER**," W. G. Dunn & Co., 40 Horton Road, Hackney, E. 53,559.

"**INDIAN SOWAR**," with representation of mounted Indian soldier; for blacking. W. J. Barron & Son, 50 Whitecross Street, E.C. 53,586.

Fancy label, with design of women drying clothes. J. H. Pett (trading as Cornubian Manufacturing Company), Redruth, Cornwall. 53,628.

"**POMADE DE MEX**," under monogram; for a pomade. W. Walker, 183 West George Street, Glasgow. 53,629.

"**COOPER'S CARBOLIC**," circular label, with representation of workmen and cask; for chemicals. Cooper & Sons, Hatcham Road, S.E. 53,720.

"**RAMZEINE**," for a medicine. Flint Ramsay, Devon House, Forest Hill. 53,744.

Design of fox and soda-water bottle; for fermented drinks. Wm. Thorne, Oliver Street, Birkenhead. 53,761.

Circular label, with representation of iceberg; for artificial manure. J. Jensen & Co., Limited, 10 St. Helen's Place, E.C. 53,783.

"**OLEATUS**," word and printed matter; for a substitute for oil. J. Goodman, 8 Noble Street, London. 53,854.

"**THE JESUIT PLASTER**," circular label, with design of Jesuit attending soldier; for plasters. A. N. Olsson and P. Sergeeff, 2 Bickley Row, Commercial Docks, E. 53,898.

"**THE NATIONAL PLASTERS**," with facsimile of proprietor's signature. A. F. E. de St. Dalmas, Leicester. 53,954.

Oblong label, with design of nurse attending patient; for a gout lotion. G. B. Stapleton & Co., Luton. 53,970.

"**D'N'S LIVERPOOL**," in double triangle; for chemical substances. S. Downes & Co., The Albany, Liverpool. 54,115.

Square with ornamental monogram; for mineral and aerated waters. J. A. Everson, Harleston, Norfolk. 54,214.

Sheep on shield; for mineral and aerated waters. J. Rothwell, 11 Mayor Street, Bolton. 54,226.

"**CARRITZA**," for a substance used in the manufacture of carbonic acid gas, for mineral-water machinery, and for mineral and aerated waters. 54,233-5.

"**THE A.C.T.**," label with head of negro in circle and star, and printed matter; for marking-ink. A. C. Thomson, 111-113 Union Street, Glasgow. 54,253.

"**SARCÓBISCO**," for a medicine. J. N. Horsfield & Sons, Sweet Street, Holbeck, Leeds. 54,253.

"**DRAKE'S EMBROCATION**," words on round label, with design of flying duck; for an embrocation for animals. R. H. Drake, East Knoyle, Wilts. 54,373.

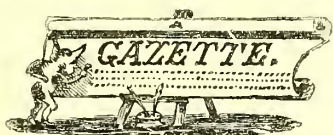
"**MAIDEN PALE**," with cock on crescent, and legend "Arise, it is light"; for common soap. H. Glover, Son & Co. (Lim.), Bradford. 54,405.

Steamer; for aerated waters. G. Sabey, 52 Masgrave Street, West Hartlepool. 54,464.

"**BUREKA, H. S. & Co.**," in round label; for albumenized paper. C. A. Rudowsky, 3 Guildhall Chambers, E.C. 54,475.

Round label, monogram in centre, surrounded by words, "Herbs, barks, flowers, roots"; for packages of drugs. W. H. Macaulay & Co, Wakefield. 54,578.

"**MIKADO**," for a perfume. F. S. Cleaver & Sons, 32-34 Red Lion Street, W.C. 54,678.



#### PARTNERSHIPS DISSOLVED.

G. T. CHENNERY and J. HALL (trading as The Redhough Tar Product Company), Gateshead-on-Tyne, tar distillers and manufacturers of chemicals.

#### FIRST MEETINGS.

COLLYER, CHARLES EDWARDS (trading as Collyer & Co.), Fenchurch Street, E.C., and Pond Road, Blackheath, Kent, hemp, fibre, and China produce broker. Sept. 8. Bankruptcy Buildings, Portugal Street, Lincoln's Inn.

SIBTHORPE, STEPHEN JAMES KENNETH, Wolverhampton, chemist and druggist. Sept. 6. Official Receiver's Office, Wolverhampton.

SMITH, DAVID, Birmingham, out of business. Sept. 7. Official Receiver's Offices, Birmingham.

SMITH, HENRY (trading as Hubbard & Smith), Leicester, wholesale chemist and druggist. Sept. 3. 28 Friar Lane, Leicester.

#### ADJUDICATIONS.

DYSON, JOHN EDWIN, East Ardsley, Yorkshire, druggist and seedsman.

HERSCHELL, GEORGE A., Moorgate Street, London, doctor of medicine.

SIBTHORPE, STEPHEN JAMES KENNETH, Wolverhampton, chemist and druggist.

#### NOTICE OF DIVIDENDS.

MASON, ALFRED EDMUND, Derby, oil and colour merchant. Div. of 10½d., Sept. 1. Official Receiver's Offices, Derby.

MAW, GEORGE, Thornton-le-Dale, Yorkshire, veterinary surgeon. First and final div. of 2s. 5d., Sept. 7. Official Receiver's Offices, Scarborough.

SALMON, THOMAS, Denbigh, chemist and druggist. First div. of 5s., Sept. 3. Official Receiver's Offices, Chester.

TEMPEST, RICHARD SPENCER (trading as R. S. Tempest & Co.), Bradford, wholesale druggist and dysalter. First div. of 5s., and second and final div. of 5s. 4d., any day. Mr. J. C. Wright's, Market Street Chambers, Bradford.

#### RECEIVING ORDER AND DATE OF PUBLIC EXAMINATION.

SIBTHORPE, STEPHEN JAMES KENNETH, Wolverhampton, chemist and druggist. Sept. 23. Wolverhampton.

#### BANKRUPTCY REPORTS.

##### *Re* EDWARD MOCKLER, Surgeon.

THE affairs of this bankrupt, who is a retired army surgeon and inspector of hospitals, residing at Sea View Terrace, Teignmouth, came before Judge Giffard at Exeter County Court on the 19th inst. Mr. G. D. Cann (Exeter), appearing for a London firm of solicitors, applied for a further adjournment to the October Court, in order that certain claims on the estate might be investigated. The debtor was seventy-six years of age, and was in weak health. He was at present in Brussels, but would probably be well enough to return by the next Court. Mr. Friend, solicitor, opposed the adjournment. He said the debtor was in receipt of 18s. 6d. per day from the War Office, or about 350*l.* a year. He married a lady of considerable fortune, who was now living at Exmouth, and who refused to give the slightest information about her husband. The Official Receiver stated that the debts were between 800*l.* and 900*l.*, proved. The case was adjourned to the October Court.

##### *Re* FREDERICK PRATT, Surgeon.

MR. JAMES BODDON, Registrar, held a sitting at the Barnstaple Bridge Hall on Friday last, and amongst the bankrupts who came up for examination was Frederick Pratt, surgeon, of Appledore. The debtor's statement of accounts showed unsecured debts amounting to 220*l.* 15s., while the assets amounted to 129*l.* 11s., the deficiency thus being 91*l.* 4s. After the debtor had been examined at some length by the Official Receiver, the examination was adjourned for a fortnight, the first meeting of the creditors not having been held.

#### FAILURE OF A CHEMICAL MANUFACTURER.

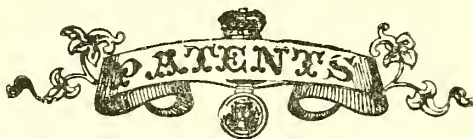
AT the Newcastle Bankruptcy Court on August 28, before Mr. Registrar Daggett, Matthew Nixon, who has been Mayor of Jarrow, came up for public examination in bankruptcy. A warrant had been issued for his arrest, but an arrangement was made for its suspension. Mr. Strachan, instructed by Mr. Purvis, was present on behalf of the debtor; and Mr. Muncaster on behalf of Mr. Thomas Sheldon, the petitioning creditor.

The debtor, in reply to the Official Receiver, said he had resided at Jarrow, Harrogate, and Dumfries, his business being that of a chemical manufacturer. He commenced business at Hebburn in 1867, with E. P. and Thomas Sheldon, under the title of Sheldon, Nixon & Co.

The partnership was dissolved from February, 1880, by a decree of the Court of Chancery. He continued the business until the end of 1881, when he closed the works, as he found he was losing money over the business. A rough statement of his affairs was then prepared by his clerks, but he could not state what it was, nor what the amount of debts were.

He continued at the works until 1883, but was not manufacturing; he did nothing but try to get rid of some stock, and collect debts. Since 1883 he had not been in business. He had no money, having paid everything away. He had filed a statement of affairs, showing liabilities amounting to 2,702*l.* 6*s.* 11*d.* and assets *nil*. The first creditor was Mr. Thomas Sheldon, of Corbridge, for 1,460*l.* Messrs. Hodgkin, Barnett & Co. were creditors for 1,541*l.*, money advanced from February, 1880 to October, 1883; and he had deposited with them two shares in the s.s. *Humbert*, for which he had paid 860*l.* in 1880, and which he now returned as worth 500*l.* He put down 500*l.* as only guesswork. Another partly secured creditor was the Eligible Permanent Building Society, which wanted 1,42*l.* The society held as security eight leasehold houses at Jarrow. In 1883, when he left Jarrow, he had no manufacturing stock. There was plant and machinery at the works, which the executors of the late Mr. E. P. Sheldon had taken possession of under a decree of the Court. His wife had money. In 1880 he was anxious to come out of the business, and commenced an action in the Court of Chancery for the dissolution of the partnership. The result of the action was that he had to become the purchaser of Mr. Thomas Sheldon's share, and was to give him 5,000*l.* He had paid Mr. Thomas Sheldon 4,000*l.* He attributed his insolvency to the failure of the chemical trade. In 1881 he made up his mind that he could not pay 20*s.* in the pound, and then he thought it would be best to drop business. He was under the impression at the time the works were closed in 1881 that the late Mr. E. P. Sheldon, who died on May 8, 1881, was a partner; but prior to that date there was litigation going on. In some of the best years a little profit was made, but for years there was a loss.

The examination was adjourned until October 8.



*The following applications for Patents have been registered at the Patent Office.*

- Absorbent Tissue**—10,488.—August 16, 1886.—S. Gamgee. An absorbent tissue for surgical and medical dressings.
- Aërated Beverages**—10,645.—August 20, 1886.—A. E. H. Loze. Apparatus for use in the manufacture of aërated beverages.
- Alkali**—10,491.—August 16, 1886.—J. Barrow. Manufacture of alkali.
- Aluminium**—10,594.—August 18, 1886.—J. Clark. Process of obtaining alloys of aluminium with copper and with other metals.—10,605.—August 18, 1886.—W. R. Lake. —Process of extracting aluminium from chlorides of the same and of aluminium and sodium.—10,606.—August 18, 1886.—Also by same, process of extracting aluminium from its chlorides, and (10,607) improvements relating to the electro-deposition of aluminium.
- Ammonia-soda Process**—10,419.—August 14, 1886.—G. Jarmay. Separating the ammonium chloride from liquors obtained in the ammonia-soda process.
- Anæsthetic Apparatus**—10,601.—August 18, 1886.—W. G. Jones. Apparatus for the administration of nitrous oxide gas and other anæsthetics.
- Anthracene**—10,910.—August 26, 1886.—C. L. Remy and C. A. Erhart. Process for obtaining anthracene from substances containing anthracene.
- Bottles**—10,372.—August 13, 1886.—G. Francis. Improvements in bottles, jars, and all kinds of carboys and other vessels for holding liquids, and in caps or covers for the same.—10,459.—August 16, 1886.—W. Vaughan. Bottle cork extractors and aërated bottle openers.—10,472.—August 16, 1886.—G. Rae. Bottle-washing machine.—10,490.—August 16, 1886.—H. E. C. Way. Bottle for containing two different liquids.—10,512.—August 17, 1886.—E. S. Shepherd. Devices for facilitating the withdrawal of aërated liquids from bottles and for similar purposes.—10,521.—August 17, 1886.—L. F. Lesieur. Protecting glass bottles or other vessels.
- Bottles**—10,802.—August 24, 1886.—H. Barrett. Bottles for containing aërated or gaseous liquids and apparatus employed in the manufacture of such bottles, and stoppers for such bottles.—10,864.—August 25, 1886.—H. Barrett. Manufacture of stoppers for bottles, jars, and the like.
- Bottling**—10,367.—August 13, 1886.—S. Bunting. Apparatus for bottling liquids.—10,473.—August 16, 1886.—G. Rae. Machines for filling and corking bottles.
- Codeine**—10,387.—August 13, 1886.—A. Knoll. Process for producing methyl-morphin (codeine) ethyl-morphine and higher homologues of morphine.
- Coffee**—10,772.—August 23, 1886.—W. R. Lake. A substitute for coffee.
- Corks**—10,760.—August 23, 1886.—F. Flack. Corks used for corking bottles.
- Dentistry**—10,882.—August 25, 1886.—A. Howarth. Articulators for use in the manufacture of sets or partial sets of artificial teeth.
- Evaporating Apparatus**—10,911.—August 26, 1886.—P. Labérie. Apparatus for evaporating the juice of beet-root, sugar cane, and other juices or liquids.
- Feeding Bottles**—10,669.—August 20, 1886.—J. E. Kusenberg and H. Lamprecht. Feeding and other bottles.
- Filtering**—10,370.—July 8, 1886.—S. Vickess. Apparatus for filtering liquids.
- Filters**—10,833.—August 26, 1886.—F. W. Brownlow. Filters.
- Gum**—10,481.—August 16, 1886.—M. Strasser. A process for the manufacture of artificial gum.
- Gum**—10,873.—August 25, 1886.—A. Rossi and C. Hellfrisch. A process for the manufacture of gum.
- Plate-cleaner**—10,697.—August 21, 1886.—G. J. Parfitt and G. J. T. J. Parfitt. Cleaning gold, silver, precious stones, and all electro-plated articles, and other metals, named "Oriental Electric Cream."
- Puff Boxes**—10,614.—August 19, 1886.—H. Levetus. Improvements in ladies' puff boxes.
- Shaving Materials**—10,706.—August 21, 1886.—J. Smith. A combined soap stick and shaving brush.
- Sheep Dip**—10,423.—August 14, 1886.—A. MacArthur. Wash or dip for sheep and other animals, also applicable for washing fabrics, &c.
- Stoppers**—10,389.—August 13, 1886.—H. Barrett. Valve screw stoppers for bottles for containing aërated or gaseous liquids.
- Sulphuric Acid, &c.**—10,695.—August 20, 1886.—Emil Jacobsen. Production of sulphurated hydrocarbons, and extraction or preparations therefrom of sulphonic acid and other substances.
- Sulphuric Acid**—10,798.—August 24, 1886.—H. J. P. Sprengel. An improvement in the production of sulphuric acid.
- Syphon**—10,761.—August 23, 1886.—F. Heyman. An improved syphon suitable for storing beer.
- Thermostats**—10,816.—August 24, 1886.—J. E. White. Improvements in thermostats.
- Truss**—10,468.—August 16, 1886.—R. Harrison. Surgical truss.
- Trusses**—10,759.—August 23, 1886.—E. Chadwick, W. Riley, and J. Wilding. Trusses for hernia.
- Washing Compounds**—10,395.—August 13, 1886.—G. W. Bremner. Method of treating materials for the manufacture of washing liquids and cleansing powders.
- Zinc Ore**—10,868.—August 25, 1886.—J. Lea and H. R. Hammond. Operating on zinc ore for producing chlorine, also zinc, and the utilisation of said zinc for coating metals galvanically.



## Trade Report.

*It should always be remembered that prices quoted in this section are as nearly as can be ascertained the lowest that are actually paid for bulk quantities. Considerable allowances have to be added in many cases before ordinary prices can be ascertained, and for many drugs it must be recollected the range of quality is very wide.*

MINCING LANE, September 3.

THE tone of the drug and chemical markets remains quiet, and there are only a very few articles in which any improvement can be recorded. At the drug sales on Thursday there was a fair competition for several articles, but in many instances lower prices were accepted. THE CHEMIST AND DRUGGIST Market Reports evidently continue to engage attention on the part of many brokers and buyers; and the promptness with which, a fortnight ago, we called attention to the sale of a parcel of spurious Pareira Brava was referred to in complimentary terms. We are informed that a syndicate is being formed to purchase from Mr. Cresswell Hewett his process for the manufacture of artificial quinine. No further evidence of the genuineness of the alleged discovery has however been brought forward.

ACID (CITRIC).—The price has receded further, to 2s. 1½d. per lb., but at this price there is a good business doing (10 tons on Wednesday), and there are further buyers for quantities. It should be borne in mind that the lemon juice sold per January shipment cannot yield acid until April. A single 5-cwt. cask, "Lawes" make, sold at 2s. 1d. per lb. in drug sale.

ACID (TARTARIC).—Extremely languid. *English* and *Foreign* makes are both quoted at 1s. 6½d. per lb.

ALOE.—The 71 cases *Cape* offered in sale on Thursday met a very slack demand, and only a few were sold at cheaper rates; good hard at 26s.; fair, partly drossy at 25s., and ordinary soft at 20s. 6d. per cwt. *Curaçao* kind is also slow of sale, although there is no lack of supply, good bright livery realised 97s. 6d. per cwt.; of East-Indian aloes, a fair proportion was sold at prices varying from 60s. to 140s. per cwt.

ANGELICA ROOT.—Twenty-six bales sold at 5s. 3d. to 6s. 6d. per cwt.

ANNATTO.—Some very good fresh East-Indian seeds are held at 5d. for sound, 4d. for damaged; 4½d. per lb. was the price paid for good seed imported from Batavia.

BALSAMS.—*Capivi* remains flat and difficult of sale; we only hear of a few small transactions in Maranham. *Peruvian* and *Tolu* quite neglected.

BUCHU LEAVES quite inanimate.

CALABAR BEANS.—The article remains in active request, and sales have been effected at the rate of 6d. per lb.

CAMPHOR steady. *Refined* is held at 11½d. per lb.

CANELLA ALBA.—Eighty-six packages were offered in drug sale, but met with little inquiry, 20s. to 25s. being paid for damaged to sound but very broken quills.

CANNABIS INDICA.—The value of this article has declined considerably recently, and at the public sales on Thursday a few bales were sold at cheap rates, viz. 3d. to 3½d. for good greenish but dusty tops.

CARDAMOMS offered sparingly, and realised an advance of 3d. to 6d. per lb. *Ceylon-Malabar*, good pale clipped longish pods to fine bold smooth-skinned ditto, 2s. 3d. to 2s. 11d. per lb. (the latter a comparatively high figure); smaller ditto, 2s.; small pale to medium-sized yellow plump pods, 1s. 1d. to 1s. 5d. *Malabar*, plump, medium-sized, mixed with dust, 2s. per lb. *Seeds*, 1s. 6d. per lb.

CASCARILLA is worth 28s. 6d. for thin branch, partly mossed, and 22s. to 25s. 6d. for ordinary to fair quality.

CHAMOMILES.—Five bales ordinary flowers were disposed of "without reserve" at 11s. per cwt.

CINCHONA BARK.—There was a good variety for sale on

Thursday, and several parcels were disposed of. *Neilgherry* quills, imported from Madras, 1½ feet long and about 1 inch in diameter, at 1s. 2d. to 1s. 5d. per lb.; thin, and rusty twig and branch, at 9d. to 10d. per lb. These lots were advertised as "answering the requirements of the B.P." Five cases *Jarabark*, fine silvery quill, about 4 feet long, were not sold; 1s. 2d. per lb. is the price suggested. Of South American barks, low damaged to good thin *Guayaquil* brought 2d. to 1s. 4d. per lb.; dull to good partly broken *Crown*, 7d. to 2s. per lb.; and some ordinary *Lima*, in very small pieces, 6d. to 6½d. per lb.

CINNAMON.—At the auctions, on Monday, a total of 2,312 bales *Ceylon* was offered, against 2,589 bales at the previous sales in May. The sales commenced with a dull tone, but the demand afterwards improved, and a good part found buyers, amounting to about 1,500 bales at and after the sales. Fine qualities sold at irregular prices, but ordinary to medium sold more readily at steady rates to an advance of ½d. per lb. Firsts sold at 8½d. to 1s. 6d.; seconds at 7½d. to 1s. 3d.; thirds at 6½d. to 1s. 2d.; and fourths at 6½d. to 8d. 18 bales *Tellicherry* first sort, import 1882, sold at 7½d.

CINNAMON CHIPS.—262 bags 7 bales *Ceylon* sold, ordinary coarse to fair, 1½d. to 2½d.; broken quill, chippings, &c., 4½d. to 5½d.

COLOCYNTH.—Good *Turkish* apples are rather scarce, and worth about 1s. 6d. per lb.; *Spanish* is entirely wanting.

COLOMBO ROOT.—The market is glutted, and fresh supplies continue to arrive. Only a few lots of ordinary quality were sold at the cheap rate of from 13s. 6d. to 17s. per cwt.

CONCENTRATED LEMON JUICE.—It is reported that 26½ f.o.b. Messina has been paid for juice of the new crop, for forward delivery (January). The imports of lemon and bergamot juice from Sicily into the United Kingdom during the last four years have been as follows:—

	1883	1884	1885	1886
1st quarter ..	1,557	1,376	1,597	492
2nd „ ..	1,634	1,620	925	370
3rd „ ..	533	513	412	303
4th „ ..	283	585	316	—
Total pipes	3,407	4,094	3,250	1,165*

\* Up to end of August.

COTTONSEED OIL.—The London market for *Refined* has again advanced, 19l. 10s. to 20l. 5s. being now the quotation according to brand and packing. In Hull refined oil in casks on the spot is quoted at 18l. 5s., and November-April at 17l. 15s. to 17l. 17s. 6d. *Crude* oil is held at 17l. 7s. 6d. in London, and at 16l. in Hull. New York advices state that *Crude* oil of the lower grades is in abundant supply, but there is no demand for this quality, and the market remains nominal. Fine quality crude oil, however, is entirely wanting. *Refined* cotton oil, on the other hand, has experienced a boom, and is in a sensitive position, with prices tending rapidly upward. Until about the middle of August an unusual dullness had prevailed, and some holders had become so discouraged over the prospects that they were ready sellers, thinking that some unknown supplies would be thrust upon the market and its foundation knocked from under. This was the condition of affairs when certain parties took hold of the reins and quietly bought right and left until the whole market quivered from the active undercurrent and rapidly shot upward, thus preventing a further concentration of stocks. The movement could not have transpired at a better time to be a success—it was a dead calm before the storm; but now that all the dealers are acquainted with the extent of the business transacted, and the motives which prompted it, their elevated views in consequence will be like a block to the wheels. Quite a number of persons shared in the movement as sellers, and their various sales swell the amount to at least 5,000 barrels, which brought 35c. for prime summer yellow, and 37c. for choice white summer oil. It is not accurately known how much oil changed hands, as the principals are silent on that point. The transactions caused considerable talk on 'Change on August 16 and 17, and holders of oil hardly knew what to ask for prime. The movement to concentrate stocks is said

to be caused by a scarcity of supplies; still the primary markets are not displaying any signs of activity. In New Orleans prime summer yellow oil is without any particular demand.

**ERGOT OF RYE.**—Several lots rather ordinary *Spanish*, of last year's crop, sold at 9½d. to 11d. per lb.

**GALANGAL ROOT.**—The decline in value established in the previous auctions appears to have scared holders into pressing forward supplies without reserve; and in Thursday's sale over 200 bags were thus disposed of at from 2s. (for very ordinary) to 8s. per cwt.

**GUINEA GRAINS** are dearer; 16s. has been paid, and the tendency of prices is still upwards.

**GUM AMMONIACUM** remains quiet; dull dark drop sold at 21s., yellow siftings at 21s., and ordinary at 9s. per cwt.

**GUM ARABIC.**—The large quantity offered in public sale last Thursday, went off with considerable spirit as regards the finer grades, but ordinary qualities were dull and unsaleable; these remarks apply also to the aspect of the private market. Of East Indian gums, *Aden* qualities have been in demand, and the sales comprise about 180 packages at 82s. 6d. to 95s. Fine *Aden* is scarce. *E. I. Amrads* sold in auction at an advance of fully 10s. per cwt. (6l. 10s. to 7l. 5s.) for fine descriptions. *Ghatta* was steady. It is said that no *Barbary* gum has been shipped as yet. The next steamer is due in about fourteen days. Of *Senegal Gum*.—About 40 bags *Bas du Fleuve* sold at 6l. 5s.; 25 bags *Galam* at 6l. 2s. 6d.; and these prices continue to rule. *Turkey Sorts*.—10 bales sold cheaply, 9l. 10s. to 9l. 12s. 6d. for pale small. Privately about 40 bales have changed hands at 9l. to 11l., according to quality. From Liverpool we hear that, the demand for *Turkey Sorts* having shown increased signs of animation, business to a somewhat larger extent has been concluded at further advanced rates, the sales being about 100 serons at 175s. to 210s. per cwt. for common to good quality, and holders display great firmness at the close. *Ghezira* has also improved in value. 105s. to 110s. per cwt. being realised for a few small lots. *Senegal* dearer, 115s. to 120s. per cwt. being paid for about 40 bags *Galam* and *Bas du Fleuve*.

**GUM BENJAMIN.**—*Siam* in good supply. *Sumatra*, very good almondy seconds, about ½th part false packed, realised 11l. to 11l. 2s. 6d.; thirds, good but false packed, 170s., and ordinary, 120s. to 130s. Some curious iron-coloured stuff, devoid of smell, was disposed of at 25s. to 29s. per cwt.

**GAMBOGE** continues to sell fairly well, 11l. being realised for broken pipe of good orange colour, but slightly damp; 10l. to 10l. 15s. for fair broken pipe to dark and dusty ditto; 180s. to 190s. for dull pickings.

**GUAIACUM** in good supply, at 1s. to 1s. 2d. for fair to good block, 7½d. to 10d. for ordinary ditto.

**GUM MYRRH** sells slowly at previous rates.

**GUM TRAGACANTH.**—8l. 10s. was paid for some fine white thin flakes from Bagdad; 65s. for red and dark mixed ditto.

**HONEY.**—In Liverpool the low prices are attracting a little more attention from buyers, with the result that about 860 barrels *Chilian* have been moved off at 15s. to 27s. 6d.; 64 barrels *Rosario* at 14s. 6d. to 16s., and 350 cases *Californian* at 20s. per cwt. In drug sale a few lots *Californian* sold at 21s. to 22s. for fair candied pale, brown *Jamaica* at 20s. to 21s.

**IPECACUANHA.**—No less than 93 serons were brought forward on Thursday. The demand was good, and nearly the whole of the supply sold at firm but unchanged rates.

**LIQURICE PASTE.**—*Smyrna* brands (VB and BX) continue in steady request without change in quotations.

**MADDER ROOT.**—We hear of sales of a moderate quantity of *Turkish* root at 27s. 6d. to 30s. 6d. per cwt.

**MUSK** is slightly dearer, and most of the good supply offered sold well; *Tonquin*, first pile, small to mixed sized, somewhat damp, thin skinned pods, at 70s. to 72s.; ditto, with more skin, at 68s. 6d.; very ordinary to very good third pile at 15s. to 41s.; dry, grained *Assam*, at 45s. 6d. (about 1s. dearer). No *Cubardine* was sold, although there was a good show of Russian pods.

**MOSS.**—In public sale a parcel of 13 bales *Irish*, dark brown and black mixed, which has been repeatedly offered, was again bought in. The values for the new crop, ordinary to very fine moss, range from 5l. to 17l. per ton, but the transactions are of small importance.

**OILS (ESSENTIAL).**—*Citronelle* is very quiet, and all the inquiries this week have not resulted in business yet; sellers on spot at 3½d. per oz., and for a good line probably a fraction less would be accepted. Arrival business is slow, price asked in the neighbourhood of 60s. per case e.i.f. *Cinnamon* and *Leaf Oil* dull, and no business reported. *Cassia* sold rather cheaper, viz. at 2s. 5d. per lb. for unworked (this lot was quitted without reserve). *Peppermint*.—H.G.H. brand is now held at 15s. 3d. per lb. *Oil of Cloves* is obtainable at a cheaper price, say 4s. 10d. per lb.

**OILS (FIXED).**—*Castor* sells rather slowly at previous prices. In Liverpool during the latter part of August there has been some fluctuation in the value of good seconds *Calcutta*, 23½d. to 2½d. per lb. being accepted, and subsequently an advance took place to 2½d., at which the market closes quietly steady. The sales are somewhat small, only comprising about 850 cases. The inquiry for arrival has not ruled active, but about 2,400 cases have changed hands, in various positions, at 2½d. to 2½d., quotations being now rather firmer.

**OPIUM.**—Sixteen cases *Turkey* imported in 1884 were advertised for sale "without reserve," but the broker decided to drop the latter clause. The whole was sold at 9s. 6d. to 9s. 9d. for the first, and 7s. 9d. for the second pile.

**PAIREIRA BRAVA.**—After the successful sale of 30 bags spurious root in the last auction, it was not surprising to find 166 packets *Paireira Brava* catalogued for sale on Thursday. It was when this parcel was reached that the selling broker offered the few remarks of which mention is made in the heading of this report. The parcel was bought in at 30s. per cwt.

**RHUBARB.**—So far as quantity goes there was a good assortment in Thursday's sale, but the quality left very much to be desired, nearly all parcels being very wormy, or spongy and badly trimmed. The following prices were realised:—*High dried* root, dull and country damaged, 11d. to 11½d.; very small and spongy, 8½d.; ordinary black-coated and wormy stuff, 5d. to 6d. per lb. *Canton* root, medium sized, dull in break and spongy, 6½d. to 7d.; medium to bold root, good bright coat, 1s. 2d. per lb. *Shensi* root, small round, orange-coated, but half dark fracture, 1s. 5d.; fair but small, 1s. 6d. per lb.

**ROSEWATER.**—Good *Persian* is held at 2s. per bottle.

**SARSAPARILLA.**—Only four serons "Crown" *Honduras* were sold, realising 1s. 5d. per lb. The assortment offered for sale was a poor one.

**ANISEED** rules exceedingly firm, as nearly all old supplies are disposed of, and new ones are coming forward very tardily. From Russia the crop is reported injured by rain, and will, at any rate, be of very dark colour. *Alicante* seed has been sold as high as 50s. per cwt.; *Russian* about 30s.; spurious *Japanese* star-anise was again offered, but did not sell.

**CANARYSEED.**—A very fair trade has been done during the last fortnight. Only with great reluctance the somewhat higher prices lately established for all descriptions have been paid; but as at present there are practically no fresh supplies, the owners of our stocks command the market, at any rate for the interval between now and the new shipments. The latter seem, according to the latest reports from Turkey, somewhat delayed, and it is also asserted that the threshing results of the new grain have not come up to what was anticipated. All these circumstances do not much tend to ease values just at present, but a great deal depends on the crops of the various other producing countries, from which nothing definite is as yet known. *Turkish* seed of ordinary quality sells at 43s. to 44s.; fine quality, 45s. to 47s. *Barbary* up to 52s.; *Dutch*, 55s.; *Sicilian*, 60s., and *Spanish* to 72s. per 464 lbs. ex warehouse. Nearest value for fine *English* seed is 50s.

**CARAWAYSEED.**—The demand here has been very strong, and as no country but Holland is at present in a position to sell, values have stiffened over there. On the other hand, it



must be borne in mind that, in view of the low figures prevailing at present, unusually large quantities have been bought for English as well as Continental account, and the flow of orders is bound to stop should holders raise their demands to a considerable extent. Up to 27s. per cwt. for fine *Dutch* seed has been paid. Of *English* seed only very little is offering.

CROTONSEED is in good supply; 27s. was paid for a lot of fair quality sold "without reserve."

CUMINSEED keeps steady, at 38s. per cwt. for *Malta*, and 22s. per cwt. for *Morocco*.

FENUGREEK keeps very firm. With hardly any stocks we have to face a demand in most of the South European countries, while the usual quarters for our supplies have nothing to part with this season. Present value for fine seed must be quoted quite 8l. to 8l. 10s. per ton.

FENNELSEED commands small sales at 20s. to 22s. per cwt. ex warehouse.

MUSTARDSEED (WHITE) is now more freely offered, but a great deal of it is hardly in condition. Dry seed of good quality commands about 10s. per bushel. There is a fair demand for brown *Bombay* at an increased value.

WORMSEED.—Seventeen bags yellowish-green *Russian* were offered, but encountered no bid, and had to be bought in at 30s. per cwt.

SENNA.—A very large supply, numbering altogether some 347 packages, was brought forward, and sold fairly well, holders being content to quit their goods at a considerable reduction. *Alexandrian* senna was not sold. *Tinnerelly*, of which the bulk consisted, realised 8d. to 9½d. for fine green leaf (one selected lot even fetching 10¼d.); and 1½d. to 6d. for low damaged to fairly good. *Pods* sold at 2d. per lb.

SPERMACETI very firm, and worth 2s. 2d. for *English*, or 2s. for *American*.

SPICES.—*Cassia Liquea* is cheaper, and has been sold at 21s. to 21s. 6d. for inferior quality. *Cassia Buds* of fresh import are worth 35s. to 36s. for a quantity. *Chillies* lower, with some private business at unknown prices. *Zanzibar Cloves* are flat, and Penang ditto are worth from 10½d. to 11½d. per lb. *Ginger* quiet at unchanged rates. *Mace* has experienced a somewhat considerable decline; fine pale Penang has been sold at 2s. 3d. per lb. *Nutmegs* are also lower. *Pepper* remains dull; while in *Pimento* there is a fair business doing at lower prices.

SULPHATE OF QUININE.—Sales of *Howard's* brand in phials at 2s. 6d. have been made, and some French quinine (*Pelletier's*) was sold at 2s. 4d. per oz., but this was a second-hand parcel, the official price being 2s. 5d. per oz. *German* quinine in bulk is reported sold at 2s. per oz.; *Italian* quinine is quoted at 2s. 1d. per oz. Mr. Chas. T. White, of the firm of Chas. T. White & Son, of New York, who manufactured quinine for eight years and dropped it in 1883, when the new process was introduced, has stated his views on the quinine situation to a representative of the *O. P. & D. Reporter*. The change in the method of manufacture, which reduces the time and expense of extracting the alkaloid by improved apparatus and a better solvent, and the improvement made in cultivated barks, have placed the industry on a different basis, he said, and prepared the manufacturers to meet closer competition. Mr. White's idea is that there is not a manufacturer's profit in quinine at 50c. per oz.; some makers, of course, may be satisfied if they only get a fair interest upon their capital, but this will not do for the smaller manufacturers. Before Mr. White's firm stopped making quinine, it had declined to \$1 per oz., and they did not see sufficient encouragement in the future of the business to continue it. There can certainly be no money in the by-products, as they have been reduced greatly in price, and the demand for them is much less than heretofore. The foreign makers are ambitious to maintain their hold on the American market, even if they have to sacrifice their product, and they have no doubt come to stay.

WAX (BEES').—Only two lots *Australian* were sold, half grey, half yellow, at 115s., and grey at 105s. per cwt.

## THE AMERICAN MARKETS.

NEW YORK, August 20.

ALTHOUGH there has been no movement of importance in the drug market during the past week, a good and steadily increasing demand is reported. There is no speculative feeling, and the continued improvement is the outcome of legitimate causes. The foreign trade at this port shows a considerable increase over the same period of last year, and is decidedly in a satisfactory condition.

The prices sterling (in parentheses) are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers can, therefore, see at a glance the course of this market compared with their own.

CURACAO ALOES.—With the exception of 60 boxes just arrived, the whole of the stock has been bought up, and an advance of 2c. is established. The quotation is now 6c. (30s.).

BALSAMS.—20 cases Maracaibo *Copaiba* arrived, but are held for 29c. (1s. 3½d.), being an advance. *Tolu* is still in active request for consumption, and stocks being now concentrated in the hands of two strong holders, the price was to-day advanced to 34c. (1s. 6½d.). Last sale from importers was 30c. (1s. 4d.).

TONQUIN BEANS.—Prime frosted Angostura are offering in a small way at \$1.50 (6s. 6d.), but this is considered too high. The great bulk of the stock is firmly held at higher figures.

COCA LEAVES.—Some sales to manufacturers are reported at 25c. (1s. 1½d.) for inferior Huanoco: 5,000 lbs. arrived from Peru this week, but are held for 28c. (1s. 3½d.).

ESSENTIAL OILS.—*Cassia* is offering freely at 62½c. (2s. 8d.). *Pennyroyal*, 75c. (3s. 4d.). New season's *spear-mint*, \$5 (21s. 3d.); *Wintergreen* very firm at the recent advance. *Sassafras* rather neglected. The recent rise in value, although maintained, does not appear to be very firm; strictly pure, 38c. (1s. 8¼d.); light specific gravity, 36c. (1s. 7¼d.).

COTTON-SEED OIL.—This week a large demand sprang up, and a considerable rise has to be noted. Prime yellow, summer refined sold at 37c. (25l. ton), but now higher rates are demanded.

ROOTS.—*Golden Seal* in good request for Germany, at 13c. (7¼d.). *Jalap* unchanged. *Senega*—The new season's root meets with active inquiry at 40c. (1s. 11d.) for ordinary western; prime bright quality is held for 44c. (2s. 1d.). Those who want a choice article should buy now. *Serpentaria* in small supply, at 42c. (2s.). There is hardly any demand.

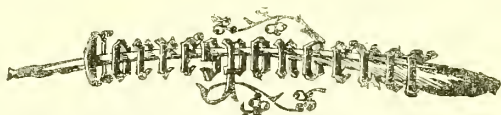
MEXICAN SARSAPARILLA.—There is not much business passing; the recent advance apparently deters purchasers from coming forward. Letters from Tampico speak of the price down there being 9c. (5½d.).

SPERMACETI.—A considerable trade has been done with the Continent, at 46c. (1s. 11½d.). At present there is only one maker able to deliver.

AMBERGRIS.—There is a good stock here of dark grey, rather soapy flavour, in small pieces, at \$17 (72s.). Prime grey is scarce, and held for \$18.50 (80s.).

QUININE.—There is no improvement in the market, although the consumptive demand continues good; 50c. (2s. 1½d.) will buy best German brands in a small way. There is hardly any speculative movement.

OIL PEPPERMINT.—As yet none of this season's oil has appeared. All sorts of prices are heard of, but when it comes down to quality and delivery, the matter falls through. If any reliance at all can be placed on the opinions of the most competent authorities in the growing districts, in Wayne County and Michigan, without doubt the crop will be below the average. There are large buyers in the market now at \$3 (12s. 9d. net), but it is very doubtful if the opening price will be so low. H. G. Hotchkiss's sells in a small way, chiefly to Hamburg, at \$3.40 (15s. 6d.).



### Memoranda for Correspondents.

*Always send your proper name and address: we do not publish them unless you wish.*

*Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.*

*If you send us newspapers please mark what you wish us to read.*

*Ask us anything of pharmaceutical interest: we shall do our best to reply.*

### Bacterium Termo.

SIR,—Having been from home for some time, it was only by the merest chance that I was enabled to see your issue of July 17. In this I find a letter by one signing himself W. D. Lambert, M.D. The gentleman in question writes a letter, which is, to say the least of it, ridiculous, and as there seems to be some misapprehension, I think that, simply in the interest of your many readers, I may as well remove it. The sputum in question was given me by Dr. Troup, with the request that I might examine it and cultivate the various organisms it might contain. It was quite putrid, having lain in a bottle for fourteen months. I made the necessary examination, and was successful in getting cultivations, with this result, bacterium termo, as was to be expected, was omnipresent, as were also the commoner of the air fungi, but I also found bacterium tuberculosis in considerable quantity and possessing their maximum vitality. If W. D. Lambert, M.D., understands anything at all of the science of bacteriology, he will at once see how completely this upsets the idea that B. termo can have any influence whatever antagonistic to the vitality of B. tuberculosis.

I am, &c.,

ALEXANDER EDINGTON, M.B.C.M.,

Assistant to the Professor of Surgery,  
University of Edinburgh.

(203/26.)

### The Redwood Testimonial.

SIR,—You asked a month since how the Redwood Fund was prospering, and I have looked in THE CHEMIST AND DRUGGIST anxiously since for some official reply to that inquiry. Surely it is time we heard something about it. I am aware that the secretarial work is done gratuitously, but I do not think an honorary secretary should serve his constituents less than would be expected of a paid secretary, and the latter, I presume, would have thought it his duty to respond to your question.

I am, sir, yours truly,

A SUBSCRIBER.

### Stock-Bottle Labels.

A subscriber writes us a letter in Italian from Malta, dated August 9, of which the following is a translation:—

"SIR,—I have very frequently been benefited by reading in THE CHEMIST AND DRUGGIST letters from my fellow-pharmacists, conveying hints as to various methods in which dispensing may be facilitated.

"Perhaps you will deem worthy of consideration a little scheme which I have adopted in my pharmacy.

"For more than six months I have found it to be a great convenience, for, when I take a bottle from its place, I need not trouble about opening my Pharmacopœia; and, moreover, I can see at a glance the different names by which its contents are known, and the price of the article, which, of course, I vary according to the dose dispensed.

"My scheme consists in affixing to the back of every bottle

in my shop a label indicating the different names of the contents, the properties of the medicine, the doses to be dispensed, and the price. I enclose labels of three different sizes as models, and would be obliged if you will bring my scheme under the notice of my colleagues.

"Yours truly,

"COSTANTINO MIZZI."

Subjoined are the labels sent.

PESO	PREZZO				NOMI DIVERSI
ONC : 16	£	s.	d.	g.	Solfato Cuprico,
ONCIA			2		Solfato di Rame
DRAMMA			1		
SCRUPOLO			1		
SCRUP : ½				6	
GRA : 5				6	
GRA : 1				6	

DOSE : Come astringente da gr ¼a; come emetico da gr V a X gr ij  
PROPRIETÀ : Caustico, Emetico, Astringente

PESO	PREZZO				NOMI DIVERSI
ONC : 16	£	s.	d.	g.	Tintura Camfora
LIBBRA		3	4		composta,
ONCIA			4		Elisir Paregarico,
DRAMMA			2		Tintura di Camfora
SCRUPOLO			1		con Opio
GRA : 5				6	

DOSE : Da 15 gocce fino a 60  
PROPRIETÀ : Pettorale—Calmanete

PESO	PREZZO				NOMI DIVERSI
ONC : 16	£	s.	d.	g.	Clina Calisaja
LIBBRA		4	6		
ONCIA			8		
DRAMMA			2		
SCRUPOLO			1		
GRA : 5				6	

DOSE : Da gr X a gr 60 = Decotto da 3j a 5ij. In infusione per 10 minuti 3x per 1 Pinta  
PROPRIETÀ : Tonic, febbrifuga

[The labels sent by our correspondent are of the following sizes:—2½ in. square; 3½ in. long by 3 in. deep; and 4½ in. long by 3½ in. deep.]

### DISPENSING NOTES.

[The opinion of practical readers is invited on subjects discussed under this heading.]

### An Iron Mixture.

SIR,—Will you or some of your readers give us their opinion of the enclosed prescription; should the liq. arsenici hydrochlor. be dispensed with tr. ferri perchlor., the latter being an antidote for the arsenic; and the tr. ferri in our opinion should not be dispensed with inf. gentian.

Yours truly,

NEMO. (27/28.)



The prescription is as follows:—

Tr. digitalis .. .. .	℥v.
Liq. arsenici hyd. .. .. .	℥ij.
Tr. ferri perchlor. .. .. .	℥v.
Inf. gent. co. .. .. .	3j.
F. a. s. Mist. 3viii.	

[Arsenic is frequently prescribed with perchloride of iron, which is not an antidote, as our correspondent states. Infusion of gentian does strike a dark colour with the iron tincture, as also does the tincture of digitalis, but gentian does not contain tannin.]

#### A Zinc Lotion.

SIR,—The following prescription was brought to be dispensed last week. Can you, through your valuable paper, tell me how it is possible to make it presentable?

Yours truly,  
G. SOWDEN.

Zinci sulph. .. .. .	gr. viii.
Tinct. lavand. co. .. .. .	3ij.
Spt. rosmarini .. .. .	3ij.
Aquæ al. .. .. .	3viii.
Ft. lotio pro oculis.	

[Pour the tincture and spirit into the bottle containing 7 oz. of distilled water; dissolve the sulphate of zinc in  $\frac{1}{2}$  oz. of water and add to the contents of the bottle. In this way there is comparatively little deposit. If spring water of ordinary hardness be used there will be a copious deposit of carbonate of zinc and sulphate of lime.]

#### Camphor and Quinine Pills.

SIR,—I have had the following prescription, or something like it, to dispense once or twice, and find the pills a little hard to make. Can you say what is the best way to go about dispensing this?

Yours truly,  
203/62.

Ext. belladonnæ .. .. .	gr. iv.
Pulv. camphoræ .. .. .	5ss.
Quinæ sulph. .. .. .	5j.
Zinci sulph. .. .. .	gr. x.
M. ft. mas. et div. in pil. xxx.	

[Powder the camphor by aid of a drop or two of water, and the zinci sulph., add the quinine and extract, with a few grains of tragacanth, and make a softish mass with a mixture of 2 parts of simple syrup and 1 part of glycerine.]

#### Peptic Mixture.

The following is a reply to "Truth's" query, page 252 of the issue of August 21:—

SIR,—I find the prescription quoted by "Truth" yields a clear mixture, which, after standing several days, shows no sign of sediment. *Liquor Pepticus* (Benger) is slightly acid, and will cause effervescence when mixed with *Sodæ bicarb.* It is difficult to see the object of the prescriber in this case, as pepsin and its preparations are practically inert in any but acid media. This mixture is strongly alkaline, and the pepsin would certainly have to wait its turn, till after the soda had been neutralised by the acid contents of the stomach.

Yours faithfully,  
F. BADEN BENDER.

#### Blaud's Pills.

SIR,—A few remarks on the best method of dispensing the following prescription would be gratefully received. Is it allowable to mix the two first ingredients and apply the action of heat?

Faithfully yours,  
T. G. A. (204/23.)

Ferri sulph. granulat. .. .. .	gr. ijss
Sodæ bicarb. .. .. .	gr. ijss.
Glycerin. c. tragacanth. .. .. .	q.s.
Ft. pil. Mitte xlviii.	

[If "T. G. A." adheres to the letter of the prescription he

will require to mix the salts as he proposes, because the following chemical reaction occurs:  $\text{FeSO}_4 + 2\text{NaHCO}_3 : \text{FeCO}_3 + \text{Na}_2\text{SO}_4 + \text{CO}_2 + \text{H}_2\text{O}$ . It is customary, however, to use sub-carbonate of soda. To the iron salt add from 15 to 20 grs. of powdered tragacanth, then the soda, and mass quickly with five drops of glycerine and 10 to 15 drops of water]

#### Concentrated Mixtures.

SIR,—The letter of "M. P. S." in your last issue shows how futile is the attempt to obtain uniformity in charges. He admits that the prescription was marked 3s. 6d., and yet he offers it for 3s. Why did he do so? No wonder his customer said that 1s. 6d. had been paid for it.

It seems to me that, "M. P. S." in modestly dropping the charge 6d., laid himself open to be bartered down as low as the conscience of the customer thought fit, and he has no one to blame but himself.

It would have been much more satisfactory if "M. P. S." had maintained the charge, and when his customer referred to the price paid at Leighton Buzzard he could have pointed out to him that the price was the same as Messrs. So-and-so's, showing that where pure drugs are used the price must be the same.

By-the-by, when was the title of "M.P.S." obtainable "by exam."?

Yours,  
OBSERVER.

#### LEGAL QUERIES.

204/24.—A correspondent has been told there exists in London a system of co-operation amongst some of the chemists, by which they are able to purchase patent medicines upon terms more advantageous than the usual patent houses, and are thus better able to compete with the cutting grocers, &c., who go in for this trade. He adds: "If you can give me any information respecting this I shall be obliged." [Is this the case?]

43/203. *Inquirer*.—We do not think an unregistered person could be prevented from entitling his place of business "Drug and Household Stores." The schedule of poisons and the legal restrictions affecting the sale of them will be found in THE CHEMIST AND DRUGGIST'S Diary, 1886, p. 125.

42/203. *Vigilans*.—You do not say whether in purchasing A.'s business it was expressly stipulated that you were to possess his proprietary preparations. In buying or selling a business such rights ought to be clearly defined or reserved. According to general custom, however, we should assume that when no special mention was made of any proprietary articles the purchaser would have a right to make and sell such articles as the vendor had regularly in the course of his business made and sold. But in this case, as we understand your narrative, a third party comes forward and says that he was the actual maker and proprietor of those pills, and that, in fact, A sold to you what was not his to sell. Supposing that statement to be true, we should think you would be wise to at least drop the assumed manufacturing name on the label, but we should not consider that you need discontinue making or selling them under the title by which they are known. At least it does not seem likely that your opponent could prevent you under the Trade Marks Act. The picture appears to be all that he has registered. But in regard to this we would advise you to consult a patent and trade mark agent. You will find the card of one among our advertisements.

#### MISCELLANEOUS SUBJECTS.

202/43. *J. A.* writes:—"What would take out *Smalt's Blue* that has been stamped on linen and afterwards embroidered?" [The marks generally come out when the linen passes through the laundry. If any reader knows of any other plan, we shall be glad to hear of it.]

204/25. *Shellac*.—*Starch Gloss*.—We examined a sample of this a few weeks ago, and found it to be composed of

borax and starch. Seven parts of borax and one of starch are about the proportions.

### Mithridate.

*Yorkshire* writes:—"The following recipe for mithridate is used in Nottingham and elsewhere:—

Pu. bacc. lauri .. .. .	3j.
" pip. long. .. .. .	j.
" sem. carui .. .. .	3ss.
" " anisi .. .. .	3ss.
" rx. gentian. .. .. .	3ij.
" " curcumæ .. .. .	3ij.
" " valerian. .. .. .	3j.
" gu. acaciæ .. .. .	3ij.
" rx. zingib. .. .. .	3j.
Bole ad color.	

Misce.

"We frequently prepare cattle drinks from Knowlson's formula, and mithridate is frequently one of the ingredients, and always use the above with good results."

204/4. *J. D.* wishes formula of Black Oil of Tar to retail at 1s. a pint, to use in cattle diseases. The following may suit:—

Turpentine .. .. .	1 pint
Linseed oil .. .. .	3 pints
Sulphuric acid .. .. .	2 oz.

Mix carefully with shaking, and add

Barbadoes tar .. .. .	3 oz.
-----------------------	-------

Shake well and allow to stand for a week or ten days, then decant the clear portion.

**Saccharum Ustum** is made by heating sugar in a pot until water ceases to be given off, and there is a brown thickish liquid left. It must not be allowed to char. When cold dissolve in water, allow any gritty matter to subside, and evaporate to a thin syrup.

203/22. *R. Modlin.*—Black Ink for Rubber Stamps.—Those that we have seen have been failures. The following is said to be good:—"Tannin black" and water, of each 1 part, glycerine 2 parts, mix all together in a mortar. We advise you to keep to the violet: it does not fade, and with a small stamp looks very well.

203/20. *J. W.*—Carminative Mixture (Brown):—

Potassii chloratis .. .. .	gr. v.
" bicarbonatis .. .. .	gr. 30
Spirit. chloroformi .. .. .	5j.
Syrupi .. .. .	3iss.
Sacch. ust. .. .. .	q.s.
Aquæ anethi ad .. .. .	3vj.

M.

*Dose:* A teaspoonful in a tablespoonful of tepid water, to be sipped slowly.

### Cough Mixture for Children.

Ammonii bromidi .. .. .	gr. x.
Vini ipecacuanhæ .. .. .	5ij.
Syrup. pruni virgin. .. .. .	3j.
Syrup. tolutan. . . . .	3j.
Aquæ ad .. .. .	3iv.

M.

*Dose:* From a half to a whole teaspoonful every three hours.

The mixture may be coloured with liq. cocci, if desired.

203/34. *Isonia.*—Essence of Linseed.—The following was given in this Journal three years ago:—

Chlorodyne .. .. .	℥45
Ol. anisi .. .. .	℥iv.
Tr. tolutanæ .. .. .	ss.
Tr. senegæ .. .. .	3ss.
Oxymel scillæ .. .. .	3iss.
Inf. lini ad .. .. .	3ij.

Add the oil of aniseed in the tincture of tolu to the oxymel and mix the other ingredients with expert shaking. *Dose:* 3j. to 5j.

199/60. *Dr. Girvan.*—Brown Robin:—

Sugar .. .. .	6 lbs.
Bruised cassia .. .. .	1 oz.
Cream of tartar .. .. .	2 "
Table salt .. .. .	1 "
Water .. .. .	8 gallons

Boil the cassia, cream of tartar, and salt in a pint of water for ten minutes, then transfer to a cask containing the rest of the ingredients, add half a pint of brewer's yeast; allow to stand from sixteen to twenty-four hours according to the season, then after it ferments pour off into a suitable vessel containing the perfume, and bottle.

Perfume for above:—

Ol. menth. pip. .. .. .	3j.
Ol. cassia .. .. .	3ss.
Ol. caryoph. .. .. .	3j.
Sp. vini rect. ad .. .. .	3j.

Other perfumes may be used.

### Deodorising Turpentine.

Replying to "A. and B." (199/65), *J. D. W.* writes:—"I once had 16 galls. turps. discoloured in a drum. It was dark as rum. I filled Winchester and 1-gall. stone bottles, and passed chlorine gas through till it was light coloured. After filtering it was clear enough for all commercial purposes, in fact as good as ever."

We'll do without them.

*Apex* has not reached the apex of ambition when he suggests canvassing patent-medicine proprietors; his notion tends backwards towards the base. I have only a little business, but have never felt dependent upon patents, fortunately. I prefer pushing my own stuff, and letting patent-medicine proprietors look after their own business. Besides, if I were a proprietor, I would sooner supply stores and grocers than chemists. It is very gratifying that chemists, with but few exceptions, are able to hold their own in spite of cutting stores and dispensing doctors. We have both in our town. Every doctor dispenses his own medicines, and yet there has been no failure.

J. D. W.

### White Oils.

SIR,—In "The Chemists' and Druggists' Diary" for 1883, p. 120, there is a recipe given for white oil, 12 eggs forming the first ingredient. Will you kindly say whether the whole of the egg should be used (minus the shell, of course), or the white only; also, can the formula be compounded so as not to separate?

Yours truly,  
L. W. J.

[The "oils" contain 12 eggs, soft soap 5 oz., turpentine 12 oz., strong solution of ammonia 6 oz., strong acetic acid 8 oz., camphor 5 oz., methylated spirit 10 oz., eucalyptus oil 2 oz., water to make 5 pints. The yolk and the white of the eggs are to be used. Place them in a large mortar and mix thoroughly with the soft soap, then add gradually half of the water; next the camphor dissolved in the spirit, then the eucalyptus and turpentine oils, the ammonia, and finally the acetic acid mixed with the rest of the water.]

TIME and patience, says the *World*, have at last brought their reward to Mr. Martin Holloway. The baronetcy, the knighthood, and even the "suitable recognition of Royal favour" still tarry in their coming; but a yet more signal honour befell last week the hereditary dispenser of medicinal boons and blessings. On Friday Mr. Martin Holloway was enabled to announce with characteristic modesty, at the top Sir Algernon's first column of fashionable intelligence, that he had left London for the Tyrol, in the company of Prince Victor of Hohenlohe-Langenbourg. The famous statues which are to perpetuate the success of pill-making and "the matchless virtues of the first lady of the land," in the Egham quadrangles, are as yet unfinished. The princely sculptor has become the travelling companion of his art patron, and in the social triumph of their beloved relative the disinherited heirs of the pious founder will doubtless find a subject for abundant thankfulness.



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In Collapsible Tubes, 8d. ... 5/ per dozen. Ditto, Perfumed, 9d. ... 6 per dozen.  
 „ 2-oz. Bottles, 1/ ... 8/ „ „ 1/ ... 8/ „  
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## LANOLINE LIEBREICH.

WE beg to inform the Trade that we have transferred the Sole Agency of Messrs. Benno Jaffé & Darmstaedter, Lanoline Works, Martinikenfelde, near Berlin, for Professor Liebreich's Lanoline, and all Medicinal and Cosmetical Lanoline Preparations, to MESSRS. BURROUGHS, WELLCOME & CO., Snow Hill Buildings, London, E.C., to whom we request all future orders may be sent.

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 August 7, 1886.

**GEO. HALLER & CO.**

## PELLETIER'S

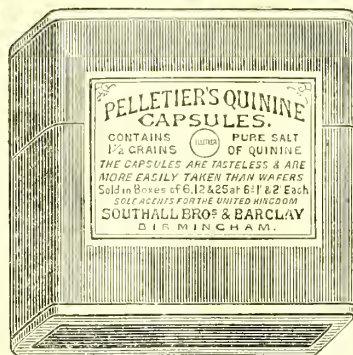
In each Capsule is enclosed  $1\frac{1}{2}$  grain of the Crystalline Salt, guaranteed Pure by the name PELLETIER being stamped upon the CAPSULE. If a Capsule is cut in two the Quinine Salt is at once discovered.

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**SULPHATE,**  
 In 200, 500, and 1,000 original bottles 5/ per 100  
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 In 200 and 500 original bottles.. 10/ „  
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 In 100 and 200 original bottles.. 8/6 „

Usual Terms, namely, 5 per cent. discount three months.

**EACH BOX CONTAINS 6, 12, and 25 CAPSULES.**

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**ACIDITY INDIGESTION, HEARTBURN, GRAVEL, AND GOUT.**

Sold by all respectable Chemists, in **LARGE-SIZED** Bottles (the 1s. size containing nearly  
*Double the quantity* usually sold at that price), at **1/, 2/6, and 3/6** each.

**CAUTION.**—Observe that the Signature of the Inventor is on every label.

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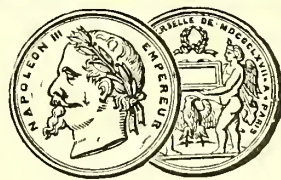
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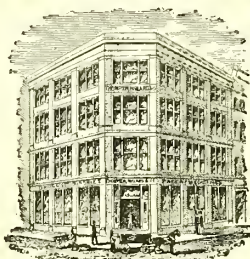


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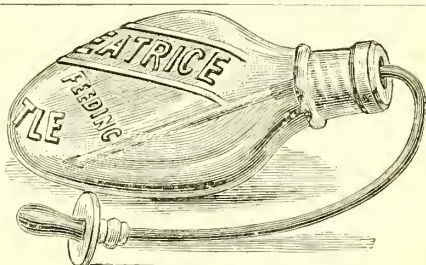
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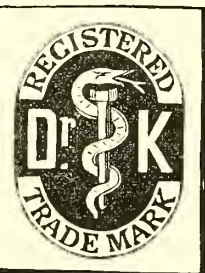
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Containing all the nutritious constituents, including the Albumen, of Fresh Meat Peptonised, i.e., so prepared that it is instantly assimilated without requiring the process of digestion. Invaluable to Invalids and persons of weak or impaired digestion, and in all cases of Dyspepsia, Poorness of Blood, Debility, &c.

1 Extract of Meat form: in pots of 3½ oz. .... (retail, 2/-) ... 1/6 each In Dry Form: Tablets in envelopes of about 7 oz. .... (retail, 4/-) ... 3/ each  
 " " " 8 oz. .... ( " 4/-) ... 3/ " " " " " 4 oz. .... ( " 4/-) ... 3/ " " " " " 2 oz. .... ( " 4/-) ... 3/ " " " " " 1 oz. .... ( " 4/-) ... 3/ " " " " " ½ oz. .... ( " 4/-) ... 3/ " " " " " ¼ oz. .... ( " 4/-) ... 3/ " " " " " 1/8 oz. .... ( " 4/-) ... 3/ " " " " " 1/16 oz. .... ( " 4/-) ... 3/ " " " " " 1/32 oz. .... ( " 4/-) ... 3/ " " " " " 1/64 oz. .... ( " 4/-) ... 3/ " " " " " 1/128 oz. .... ( " 4/-) ... 3/ " " " " " 1/256 oz. .... ( " 4/-) ... 3/ " " " " " 1/512 oz. .... ( " 4/-) ... 3/ " " " " " 1/1024 oz. .... ( " 4/-) ... 3/ " " " " " 1/2048 oz. .... ( " 4/-) ... 3/ " " " " " 1/4096 oz. .... ( " 4/-) ... 3/ " " " " " 1/8192 oz. .... ( " 4/-) ... 3/ " " " " " 1/16384 oz. .... ( " 4/-) ... 3/ " " " " " 1/32768 oz. .... ( " 4/-) ... 3/ " " " " " 1/65536 oz. .... ( " 4/-) ... 3/ " " " " " 1/131072 oz. .... ( " 4/-) ... 3/ " " " " " 1/262144 oz. .... ( " 4/-) ... 3/ " " " " " 1/524288 oz. .... ( " 4/-) ... 3/ " " " " " 1/1048576 oz. .... ( " 4/-) ... 3/ " " " " " 1/2097152 oz. .... ( " 4/-) ... 3/ " " " " " 1/4194304 oz. .... ( " 4/-) ... 3/ " " " " " 1/8388608 oz. .... ( " 4/-) ... 3/ " " " " " 1/16777216 oz. .... ( " 4/-) ... 3/ " " " " " 1/33554432 oz. .... ( " 4/-) ... 3/ " " " " " 1/67108864 oz. .... ( " 4/-) ... 3/ " " " " " 1/134217728 oz. .... ( " 4/-) ... 3/ " " " " " 1/268435456 oz. .... ( " 4/-) ... 3/ " " " " " 1/536870912 oz. .... ( " 4/-) ... 3/ " " " " " 1/1073741824 oz. .... ( " 4/-) ... 3/ " " " " " 1/2147483648 oz. .... ( " 4/-) ... 3/ " " " " " 1/4294967296 oz. .... ( " 4/-) ... 3/ " " " " " 1/8589934592 oz. .... ( " 4/-) ... 3/ " " " " " 1/17179869184 oz. .... ( " 4/-) ... 3/ " " " " " 1/34359738368 oz. .... ( " 4/-) ... 3/ " " " " " 1/68719476736 oz. .... ( " 4/-) ... 3/ " " " " " 1/137438953472 oz. .... ( " 4/-) ... 3/ " " " " " 1/274877906944 oz. .... ( " 4/-) ... 3/ " " " " " 1/549755813888 oz. .... ( " 4/-) ... 3/ " " " " " 1/1099511627776 oz. .... ( " 4/-) ... 3/ " " " " " 1/2199023255552 oz. .... ( " 4/-) ... 3/ " " " " " 1/4398046511104 oz. .... ( " 4/-) ... 3/ " " " " " 1/8796093022208 oz. .... ( " 4/-) ... 3/ " " " " " 1/17592186044416 oz. .... ( " 4/-) ... 3/ " " " " " 1/35184372088832 oz. .... ( " 4/-) ... 3/ " " " " " 1/70368744177664 oz. .... ( " 4/-) ... 3/ " " " " " 1/140737488355328 oz. .... ( " 4/-) ... 3/ " " " " " 1/281474976710656 oz. .... ( " 4/-) ... 3/ " " " " " 1/562949953421312 oz. .... ( " 4/-) ... 3/ " " " " " 1/1125899906842624 oz. .... ( " 4/-) ... 3/ " " " " " 1/2251799813685248 oz. .... ( " 4/-) ... 3/ " " " " " 1/4503599627370496 oz. .... ( " 4/-) ... 3/ " " " " " 1/9007199254740992 oz. .... ( " 4/-) ... 3/ " " " " " 1/18014398509481984 oz. .... ( " 4/-) ... 3/ " " " " " 1/36028797018963968 oz. .... ( " 4/-) ... 3/ " " " " " 1/72057594037927936 oz. .... ( " 4/-) ... 3/ " " " " " 1/144115188075855872 oz. .... ( " 4/-) ... 3/ " " " " " 1/288230376151711744 oz. .... ( " 4/-) ... 3/ " " " " " 1/576460752303423488 oz. .... ( " 4/-) ... 3/ " " " " " 1/1152921504606846976 oz. .... ( " 4/-) ... 3/ " " " " " 1/2305843009213693952 oz. .... ( " 4/-) ... 3/ " " " " " 1/4611686018427387904 oz. .... ( " 4/-) ... 3/ " " " " " 1/9223372036854775808 oz. .... ( " 4/-) ... 3/ " " " " " 1/18446744073709551616 oz. .... ( " 4/-) ... 3/ " " " " " 1/36893488147419103232 oz. .... ( " 4/-) ... 3/ " " " " " 1/73786976294838206464 oz. .... ( " 4/-) ... 3/ " " " " " 1/147573952589676412928 oz. .... ( " 4/-) ... 3/ " " " " " 1/295147905179352825856 oz. .... ( " 4/-) ... 3/ " " " " " 1/590295810358705651712 oz. .... ( " 4/-) ... 3/ " " " " " 1/1180591620717411303424 oz. .... ( " 4/-) ... 3/ " " " " " 1/2361183241434822606848 oz. .... ( " 4/-) ... 3/ " " " " " 1/4722366482869645213696 oz. .... ( " 4/-) ... 3/ " " " " " 1/9444732965739290427392 oz. .... ( " 4/-) ... 3/ " " " " " 1/18889465931478580854784 oz. .... ( " 4/-) ... 3/ " " " " " 1/37778931862957161709568 oz. .... ( " 4/-) ... 3/ " " " " " 1/75557863725914323419136 oz. .... ( " 4/-) ... 3/ " " " " " 1/151115727451828646838272 oz. .... ( " 4/-) ... 3/ " " " " " 1/302231454903657293676544 oz. .... ( " 4/-) ... 3/ " " " " " 1/604462909807314587353088 oz. .... ( " 4/-) ... 3/ " " " " " 1/1208925819614629174706176 oz. .... ( " 4/-) ... 3/ " " " " " 1/2417851639229258349412352 oz. .... ( " 4/-) ... 3/ " " " " " 1/4835703278458516698824704 oz. .... ( " 4/-) ... 3/ " " " " " 1/9671406556917033397649408 oz. .... ( " 4/-) ... 3/ " " " " " 1/19342813113834066795298816 oz. .... ( " 4/-) ... 3/ " " " " " 1/38685626227668133590597632 oz. .... ( " 4/-) ... 3/ " " " " " 1/77371252455336267181195264 oz. .... ( " 4/-) ... 3/ " " " " " 1/154742504910672534362390528 oz. .... ( " 4/-) ... 3/ " " " " " 1/309485009821345068724781056 oz. .... ( " 4/-) ... 3/ " " " " " 1/618970019642690137449562112 oz. .... ( " 4/-) ... 3/ " " " " " 1/1237940039285380274899124224 oz. .... ( " 4/-) ... 3/ " " " " " 1/2475880078570760549798248448 oz. .... ( " 4/-) ... 3/ " " " " " 1/4951760157141521099596496896 oz. .... ( " 4/-) ... 3/ " " " " " 1/9903520314283042199192993792 oz. .... ( " 4/-) ... 3/ " " " " " 1/19807040628566084398385987584 oz. .... ( " 4/-) ... 3/ " " " " " 1/39614081257132168796771975168 oz. .... ( " 4/-) ... 3/ " " " " " 1/79228162514264337593543950336 oz. .... ( " 4/-) ... 3/ " " " " " 1/158456325028528675187087900672 oz. .... ( " 4/-) ... 3/ " " " " " 1/316912650057057350374175801344 oz. .... ( " 4/-) ... 3/ " " " " " 1/633825300114114700748351602688 oz. .... ( " 4/-) ... 3/ " " " " " 1/1267650600228229401496703205376 oz. .... ( " 4/-) ... 3/ " " " " " 1/2535301200456458802993406410752 oz. .... ( " 4/-) ... 3/ " " " " " 1/5070602400912917605986812821504 oz. .... ( " 4/-) ... 3/ " " " " " 1/10141204801825835211973625643008 oz. .... ( " 4/-) ... 3/ " " " " " 1/20282409603651670423947251286016 oz. .... ( " 4/-) ... 3/ " " " " " 1/40564819207303340847894502572032 oz. .... ( " 4/-) ... 3/ " " " " " 1/81129638414606681695789005144064 oz. .... ( " 4/-) ... 3/ " " " " " 1/162259276829213363391578010288128 oz. .... ( " 4/-) ... 3/ " " " " " 1/324518553658426726783156020576256 oz. .... ( " 4/-) ... 3/ " " " " " 1/649037107316853453566312041152512 oz. .... ( " 4/-) ... 3/ " " " " " 1/1298074214633706907132624082305024 oz. .... ( " 4/-) ... 3/ " " " " " 1/2596148429267413814265248164610048 oz. .... ( " 4/-) ... 3/ " " " " " 1/5192296858534827628530496329220096 oz. .... ( " 4/-) ... 3/ " " " " " 1/10384593717069655257060992658440192 oz. .... ( " 4/-) ... 3/ " " " " " 1/20769187434139310514121985316880384 oz. .... ( " 4/-) ... 3/ " " " " " 1/41538374868278621028243970633760768 oz. .... ( " 4/-) ... 3/ " " " " " 1/83076749736557242056487941267521536 oz. .... ( " 4/-) ... 3/ " " " " " 1/166153499473114484112975882535043072 oz. .... ( " 4/-) ... 3/ " " " " " 1/332306998946228968225951765070086144 oz. .... ( " 4/-) ... 3/ " " " " " 1/664613997892457936451903530140172288 oz. .... ( " 4/-) ... 3/ " " " " " 1/1329227995784915872903807060280344576 oz. .... ( " 4/-) ... 3/ " " " " " 1/2658455991569831745807614120560689152 oz. .... ( " 4/-) ... 3/ " " " " " 1/5316911983139663491615228241121378304 oz. .... ( " 4/-) ... 3/ " " " " " 1/10633823966279326983230456482242756608 oz. .... ( " 4/-) ... 3/ " " " " " 1/21267647932558653966460912964485513216 oz. .... ( " 4/-) ... 3/ " " " " " 1/42535295865117307932921825928971026432 oz. .... ( " 4/-) ... 3/ " " " " " 1/85070591730234615865843651857942052864 oz. .... ( " 4/-) ... 3/ " " " " " 1/170141183460469231731687303715884105728 oz. .... ( " 4/-) ... 3/ " " " " " 1/340282366920938463463374607431768211456 oz. .... ( " 4/-) ... 3/ " " " " " 1/680564733841876926926749214863536422912 oz. .... ( " 4/-) ... 3/ " " " " " 1/1361129467683753853853498429727072845824 oz. .... ( " 4/-) ... 3/ " " " " " 1/2722258935367507707706996859454145691648 oz. .... ( " 4/-) ... 3/ " " " " " 1/5444517870735015415413993718908291383296 oz. .... ( " 4/-) ... 3/ " " " " " 1/10889035741470030830827987437816582766592 oz. .... ( " 4/-) ... 3/ " " " " " 1/21778071482940061661655974875633165533184 oz. .... ( " 4/-) ... 3/ " " " " " 1/43556142965880123323311949751266331066368 oz. .... ( " 4/-) ... 3/ " " " " " 1/87112285931760246646623899502532662132736 oz. .... ( " 4/-) ... 3/ " " " " " 1/174224571863520493293247799005065324265472 oz. .... ( " 4/-) ... 3/ " " " " " 1/348449143727040986586495598010130648530944 oz. .... ( " 4/-) ... 3/ " " " " " 1/696898287454081973172991196020261297061888 oz. .... ( " 4/-) ... 3/ " " " " " 1/1393796574908163946345982392040522594123776 oz. .... ( " 4/-) ... 3/ " " " " " 1/2787593149816327892691964784081045188247552 oz. .... ( " 4/-) ... 3/ " " " " " 1/5575186299632655785383929568162090376495104 oz. .... ( " 4/-) ... 3/ " " " " " 1/11150372599265311570767859136324180752990208 oz. .... ( " 4/-) ... 3/ " " " " " 1/22300745198530623141535718272648361505980416 oz. .... ( " 4/-) ... 3/ " " " " " 1/44601490397061246283071436545296723011960832 oz. .... ( " 4/-) ... 3/ " " " " " 1/89202980794122492566142873090593446023921664 oz. .... ( " 4/-) ... 3/ " " " " " 1/178405961588244985132285746181186892047843328 oz. .... ( " 4/-) ... 3/ " " " " " 1/356811923176489970264571492362373784095686656 oz. .... ( " 4/-) ... 3/ " " " " " 1/713623846352979940529142984724747568191373312 oz. .... ( " 4/-) ... 3/ " " " " " 1/1427247692705959881058285969449495136382746624 oz. .... ( " 4/-) ... 3/ " " " " " 1/2854495385411919762116571938898990272765493248 oz. .... ( " 4/-) ... 3/ " " " " " 1/5708990770823839524233143877797980545530986496 oz. .... ( " 4/-) ... 3/ " " " " " 1/11417981541647679048466287755595961091061972992 oz. .... ( " 4/-) ... 3/ " " " " " 1/22835963083295358096932575511191922182123945984 oz. .... 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( " 4/-) ... 3/ " " " " " 1/93536104789177786765035829293842113257979682750464 oz. .... ( " 4/-) ... 3/ " " " " " 1/187072209578355573530071658587684226515959365500928 oz. .... ( " 4/-) ... 3/ " " " " " 1/374144419156711147060143317175368453031918731001856 oz. .... ( " 4/-) ... 3/ " " " " " 1/748288838313422294120286634350736906063837462003712 oz. .... ( " 4/-) ... 3/ " " " " " 1/1496577676626844588240573268701473812127674924007424 oz. .... ( " 4/-) ... 3/ " " " " " 1/2993155353253689176481146537402947624255349848014848 oz. .... ( " 4/-) ... 3/ " " " " " 1/5986310706507378352962293074805895248510699696029696 oz. .... ( " 4/-) ... 3/ " " " " " 1/11972621413014756705924586149611790497021399392059392 oz. .... ( " 4/-) ... 3/ " " " " " 1/23945242826029513411849172299223580994042798784118784 oz. .... ( " 4/-) ... 3/ " " " " " 1/47890485652059026823698344598447161988085597568237568 oz. .... ( " 4/-) ... 3/ " " " " " 1/95780971304118053647396689196894323976171195136475136 oz. .... ( " 4/-) ... 3/ " " " " " 1/191561942608236107294793378393788647952342390272950272 oz. .... ( " 4/-) ... 3/ " " " " " 1/383123885216472214589586756787577295904684780545900544 oz. .... ( " 4/-) ... 3/ " " " " " 1/766247770432944429179173513575154591809369561091801088 oz. .... ( " 4/-) ... 3/ " " " " " 1/1532495540865888858358347027150309183618739122183602176 oz. .... ( " 4/-) ... 3/ " " " " " 1/3064991081731777716716694054300618367237478244367204352 oz. .... ( " 4/-) ... 3/ " " " " " 1/6129982163463555433433388108601236734474956488734408704 oz. .... ( " 4/-) ... 3/ " " " " " 1/12259964326927110866866776217202473468949912977468817408 oz. .... ( " 4/-) ... 3/ " " " " " 1/24519928653854221733733552434404946937899825954937634816 oz. .... ( " 4/-) ... 3/ " " " " " 1/49039857307708443467467104868809893875799651909875269632 oz. .... ( " 4/-) ... 3/ " " " " " 1/98079714615416886934934209737619787751599303819750539264 oz. .... ( " 4/-) ... 3/ " " " " " 1/196159429230833773869868419475239575503198607639501078528 oz. .... ( " 4/-) ... 3/ " " " " " 1/392318858461667547739736838950479151006397215279002157056 oz. .... ( " 4/-) ... 3/ " " " " " 1/784637716923335095479473677900958302012794430558004314112 oz. .... ( " 4/-) ... 3/ " " " " " 1/1569275433846670190958947355801916604025588861116008628224 oz. .... ( " 4/-) ... 3/ " " " " " 1/3138550867693340381917894711603833208051177722232017256448 oz. .... ( " 4/-) ... 3/ " " " " " 1/6277101735386680763835789423207666416102355444464034512896 oz. .... ( " 4/-) ... 3/ " " " " " 1/12554203470773361527671578846415332832204710888928069025788912 oz. .... ( " 4/-) ... 3/ " " " " " 1/25108406941546723055343157692830665664409421777856138051577824 oz. .... ( " 4/-) ... 3/ " " " " " 1/50216813883093446110686315385661331328818843555712276103155648 oz. .... ( " 4/-) ... 3/ " " " " " 1/100433627766186892221372630771322662657637687111424552206311296 oz. .... 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PLEASE NOTE IMPORTANT ADDITIONS.\*

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		DOZ. BOTTLES					DOZ. BOTTLES				
		containing		containing			containing		containing		
		25	100	25	100		25	100	25	100	
		PILLS	PILLS			PILLS	PILLS			PILLS	PILLS
*Aconitine Crystals (Duquesnel's) .....	1-500 gr.	7	d.	24	d.	Hydrastine (White Alkaloid) .....	1-2 gr.	20	6	79	0
" Barb. B.P. ....	1-200 gr.	7	0	24	0	Iodoform .....	1 gr.	9	0	32	0
Aloes " Dilute (Hall's Dinner) .....	5 gr.	5	0	16	0	" and Iron .....	11	0	39	6	
" Socotrine, B.P. ....	5 gr.	5	0	16	0	*Ipecac. Powdered .....	1-4 gr.	5	0	16	0
" and Asafetida, B.P. ....	5 gr.	5	0	16	0	" Comp. (Ipecac and Opium) .....	5 gr.	5	0	16	0
" and Iron, B.P. ....	5 gr.	5	0	16	0	" and Squill, B.P. ....	5 gr.	5	0	16	0
" and Myrrh, B.P. ....	3 gr.	5	6	18	0	*Iron, Arseniate .....	1-8 gr.	5	6	18	0
" Nux Vomica .....	5 gr.	6	0	20	0	" Carbonate, B.P. ....	5 gr.	5	6	18	0
*Alotin .....	1-10 gr.	5	0	16	0	" by Hydrogen (Quevenne's) .....	1 gr.	5	0	16	0
" .....	1-4 gr.	6	0	20	0	" Iodide (Blancard's Formula) .....	1 gr.	7	0	24	0
" .....	1-2 gr.	7	0	24	0	" and Quinine Citrate .....	2 gr.	10	0	35	6
" .....	1 gr.	11	0	39	6	" Quinine and Strychnine .....	13	6	49	6	
" Compound .....	7	0	24	0	Laxative Vegetable (Improved Cath.) .....	5	6	18	0		
" and Strychnine .....	7	0	24	0	*Manganese, Bin-oxide .....	2	gr.	9	0	32	0
" Strychnine and Belladonna .....	7	0	24	0	Mercury, Bin-Iodide .....	1-16 gr.	5	0	16	0	
Anti-Cholera .....	2 gr.	7	0	24	0	" Proto-Iodide .....	1-8 gr.	5	0	16	0
*Anti-Dyspepsia (Fothergill's) .....	7	0	24	0	" .....	1-4 gr.	5	0	16	0	
*Aphrodisiac .....	16	0	59	6	Morphine, Muriate .....	1-8 gr.	7	0	24	0	
Arsenious Acid .....	1-50 gr.	5	0	16	0	" .....	1-4 gr.	9	0	32	0
" .....	1-20 gr.	5	0	16	0	*Narcotic Extracts (Brown-Sequard) .....	15	0	55	6	
*Asafetida, U.S. ....	5 gr.	5	0	16	0	Nitro-Glycerin .....	1-100 gr.	7	0	24	0
" Compound, B.P. ....	5 gr.	5	0	16	0	" .....	1-50 gr.	7	0	24	0
*Atropine .....	1-300 gr.	7	0	24	0	Opium, Powdered .....	1 gr.	7	0	24	0
" .....	1-100 gr.	7	0	24	0	" and Acetate of Lead, B.P. ....	5 gr.	7	0	24	0
Blue Mass, B.P. ....	1 gr.	5	0	16	0	" and Camphor .....	7	0	24	0	
" .....	2 gr.	5	0	16	0	Pepsin, Pure Concentrated .....	1 gr.	9	0	32	0
" .....	3 gr.	5	0	16	0	Phosphorus .....	1-100 gr.	6	0	20	0
" .....	5 gr.	5	6	18	0	" .....	1-50 gr.	6	0	20	0
" Colocyath and Hyoscy. ....	9	0	32	0	" .....	1-30 gr.	6	0	20	0	
Calcium Sulphide .....	1-10 gr.	6	0	20	0	" and Iron .....	8	0	28	0	
" .....	1-4 gr.	6	0	20	0	" Iron and Quinine .....	17	0	63	6	
" .....	1-2 gr.	6	0	20	0	" and Nux Vomica .....	7	0	24	0	
" .....	1 gr.	6	0	20	0	" Nux Vomica and Iron .....	8	0	28	0	
*Calomel, Colocyath, and Hyoscyamus .....	5 gr.	5	6	18	0	" and Quinine .....	17	0	63	6	
" Comp. B.P. ....	5 gr.	5	6	18	0	" Quinine, Iron, and Strychnine .....	17	0	63	6	
" and Opium .....	7	6	26	0	" and Valer. Zinc .....	11	0	39	6		
*Camphor and Hyoscyamus .....	5	6	18	0	Picrotoxin .....	1-80 gr.	7	0	24	0	
" Mono-Bromated .....	2 gr.	11	0	39	6	*Podophyllin .....	1-8 gr.	5	0	16	0
*Cannabis Indica Extract .....	1-4 gr.	7	0	24	0	" .....	1-4 gr.	5	0	16	0
" .....	1-2 gr.	9	0	32	0	" .....	1-2 gr.	5	6	18	0
*Cascara Sagrada Extract .....	3 gr.	7	0	24	0	" Comp. ....	8	0	28	0	
Cathartic Compound U.S.P. ....	5	6	18	0	Quinine, Bi-Sulphate .....	1-4 gr.	5	0	16	0	
*Codeine .....	1-2 gr.	20	6	79	0	" .....	1-2 gr.	5	6	18	0
Colocyath Comp. B.P. ....	4 gr.	8	0	28	0	" .....	1 gr.	6	0	20	0
" .....	5 gr.	9	0	32	0	" .....	2 gr.	9	0	32	0
" " and Blue Mass .....	5 gr.	9	0	32	0	" .....	3 gr.	12	6	45	6
" " and Calomel .....	5 gr.	9	0	32	0	" .....	4 gr.	16	6	61	6
" " and Hyoscy. B.P. ....	5 gr.	9	0	32	0	" .....	5 gr.	20	6	75	0
" " Extract, B.P. ....	5 gr.	9	0	32	0	" Sulphate .....	1-4 gr.	5	6	18	0
Conium Compound, B.P. ....	5 gr.	5	0	16	0	" .....	1-2 gr.	6	0	20	0
*Copaiba Compound .....	5	6	18	0	" .....	1 gr.	6	6	22	0	
" and Oleo-Resin Cubeb .....	11	0	39	6	" .....	2 gr.	10	0	36	0	
Corrosive Sublimate .....	1-30 gr.	5	0	16	0	" .....	3 gr.	14	6	51	6
" .....	1-20 gr.	5	0	16	0	" .....	4 gr.	18	6	67	6
" .....	1-10 gr.	5	0	16	0	" .....	5 gr.	22	0	83	0
Croton Chloral .....	1 gr.	10	0	36	0	" Comp. (Anti-malarial) .....	15	0	55	6	
" .....	2 gr.	17	0	63	6	Rhubarb Comp., B.P. ....	5 gr.	7	0	24	0
*Cubeb, Oleo-Resin, with Soda .....	7	0	24	0	" and Blue Mass .....	5 gr.	7	0	24	0	
Digitalin .....	1-60 gr.	7	0	24	0	*Rhubarb, Ipecac, and Soda .....	7	0	24	0	
*Elatrine .....	1-20 gr.	13	0	47	6	Salicylic Acid .....	2 gr.	7	0	24	0
Emmenagogue (Mutter's) .....	5	6	18	0	" .....	5 gr.	11	0	39	6	
Ergotin .....	3 gr.	16	6	63	0	" Comp. ....	16	6	63	0	
Euonymin .....	2 gr.	16	0	59	0	Soap Comp., B.P. ....	5 gr.	8	0	29	0
" .....	3 gr.	20	6	79	0	Squill Comp., B.P. ....	5 gr.	5	6	18	0
" Compound .....	16	0	59	0	Strychnine .....	1-50 gr.	5	0	16	0	
Ferruginous (Blaud's) .....	3 gr.	6	0	20	0	Zinc Phosphide .....	1-4 gr.	7	0	24	0
" .....	5 gr.	7	0	24	0	" .....	1-2 gr.	9	0	32	0
" .....	5 gr.	7	0	24	0	" Valerianate .....	1 gr.	8	6	30	0

The reputation of Gelatine-coated Pills has been created by our manufacture. In ordering, be careful to specify "McK. &amp; R. PILLS."

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INDISPUTABLY the BEST PETROLEUM JELLY in the MARKET.

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ICE REFINED—ABSOLUTELY PURE.

In Casks (Tin-lined), in 6-Gal. Drums, in Winchesters, or in Bottles.

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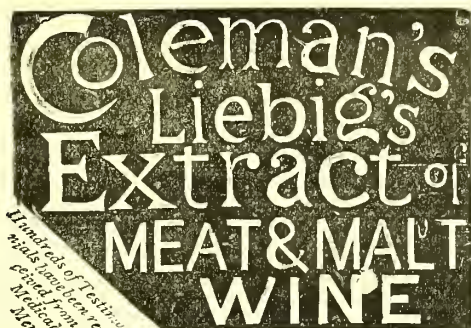
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ESSENTIAL OIL OF

Lavender, Spic, Rosemary, Thyme (red), Thyme (white), Neroli,	Petit Grain, Geranium, Aniseed, Carraway, Cloves, Cassia, Cedar Wood,	Cinnamon Leaf, Citronelle, Lemongrass, Gingergrass, Sassafras, Peppermint,	Bitter Almond, Patchouli, Otto of Roses, Sandal Wood, Mirbane, Eucalyptus,	Lemon, Bergamot, Orange, Vetivert, Ylang Ylang, Bay, Linaloe.
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Is a Delicious Beverage and Tonic made from Port Wine, Liebig's Extract of Meat and Extract of Malt.

**NUTRITIOUS, STRENGTHENING,  
STIMULATING,  
Flesh-forming, and Health-restoring.**

SUITABLE FOR THE ROBUST IN HEALTH  
AS WELL AS THE INVALID.

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Gentlemen,—I received sample bottle of your "Extract of Beef and Malt Wine." I find that it is the same as I used extensively over two years ago, and which I found of so much benefit that I have used it ever since in my practice, and numbers of my patients get it for themselves. I have great confidence in it as a tonic and restorative. It is also very useful in cases of consumption.

I wish you would send me one dozen bottles, and then will send you money by return. You can send it by rail by G.E.R. on to the G.N.R., and then it will come direct to Leeds.

I am, yours truly,

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Sold by all Druggists, Wine Merchants, and Patent Medicine Vendors in the United Kingdom, in Bottles, 2s. 9d. and 4s. 6d. each.

Ask for COLEMAN'S LIEBIG'S EXTRACT OF MEAT AND MALT WINE, and "see that you get it."

2/9 size, 30s. per doz. 4/6 size, 50s. per doz.

Carriage paid to any Railway Station in Great Britain.

Sample Pint Bottle sent free by Post on receipt of 33 stamps.

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THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s., and 2s. each.

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Makes delicious Puddings without Eggs, Pastry without Butter, and beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

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For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction if the instructions given are implicitly followed. Sold in boxes 2d., 6d., and 1s. each.

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By Special Warrant,  
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INVENTORS AND SOLE PROPRIETORS OF THE



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#### THE CHEMICAL EXTRACT.

For assuaging pain and inflammation in all wounds, saddle galls, strains, bruises, and swellings in horses; for paining after calving and lambing, and for swollen udders and sore feet. ½-dozen box, 7s. 6d.

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Celebrated for inflammatory disorders; such as fevers, pleurisy, foot-and-mouth complaint, yellows, surfeit, and red water. Also for difficult calving and lambing. 3s. 6d. and 13s. per dozen box.

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Unmatched for colic or gripes and debility in horses. for colds, chills, shivering fits, and diarrhoea in cattle, calves, and sheep. 20s. per dozen box.

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## BIGG'S

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### SHEEP AND LAMB DIPPING COMPOSITION,

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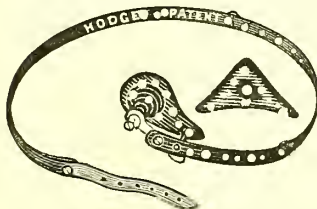
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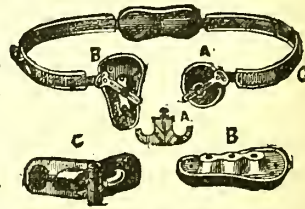
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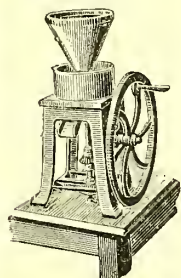


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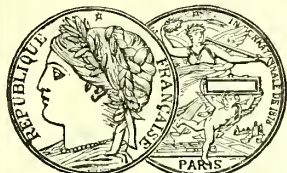


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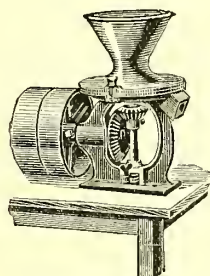
PARIS. 1878.



VIENNA. 1873.

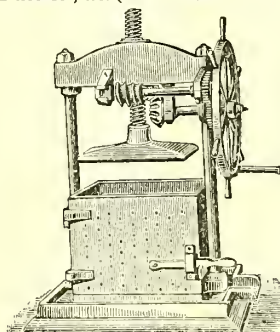
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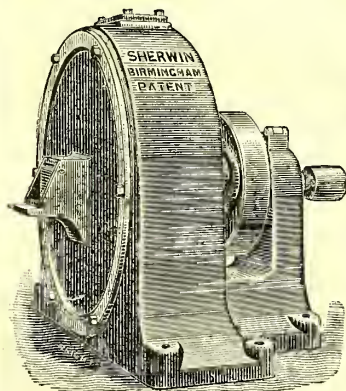
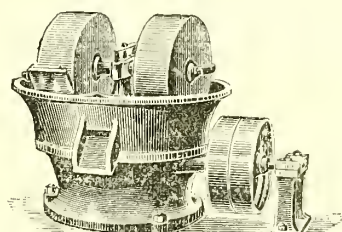
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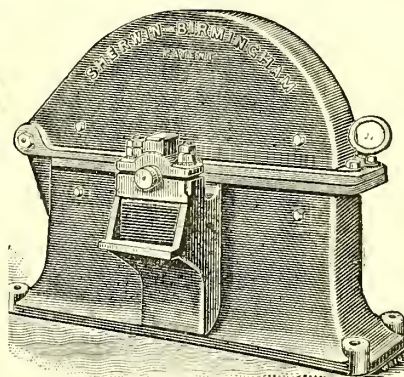
Rotary Screen Mill.

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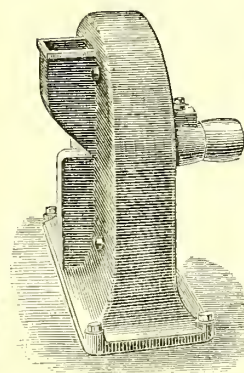
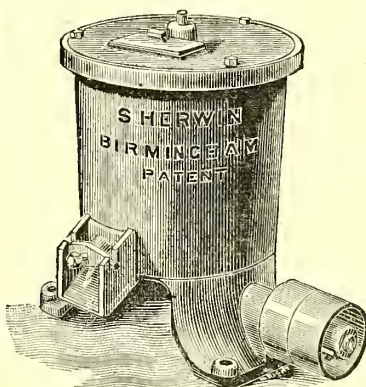
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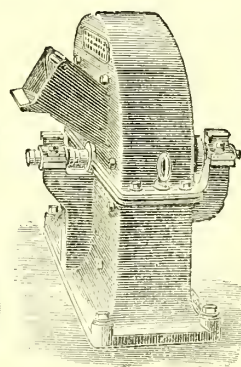
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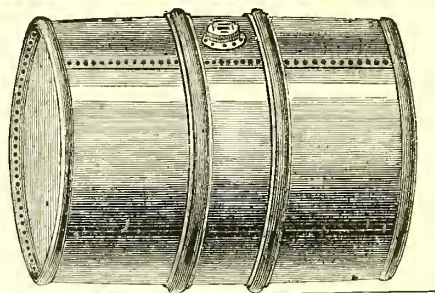
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SPIRITS  
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5 galls. 56 o.p. at  
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The BEST English Grain Spirit,  
Free from Fusel Oil.  
Chemically Pure.  
Special Quotation for Quantity.

ORANGE  
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JAMES BURROUGH,  
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THE ONLY  
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**CHLORIDE OF LIME!**  
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MANUFACTURERS

THE N. C. Cos. PACKAGES HAVE STOOD THE TEST FOR MANY YEARS, AND CAN  
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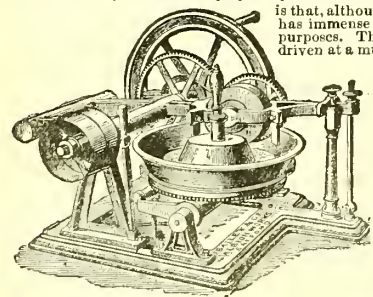


BEWARE  
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CALLED AIRTIGHT  
PACKAGES.

## BAILEY'S MINTON-WARE BOWL DRUG MILL.

(CARR'S PATENT.) FOR HAND OR POWER.

Will reduce Crystals to an impalpable powder. The chief feature of this machine is that, although it can be turned with ease, it has immense frictional power for levigating purposes. This is caused by the runner being driven at a much greater speed than the bowl.



Diameter of Bowl, 18 inches.  
Price, £11.  
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Mr. J. DUTTON, Rock Ferry, Birkenhead, says—"The Mill you sent me answers admirably for powdering all kinds of Salts, and for many other things, such as Opium, Scammony, Soap, Almonds, Mace, &c. It also effects a great saving of time and labour in mixing various Powders, such as Tooth Powder, Lemon and Kali, &c., and proves a very useful apparatus in the shop."

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 Will forward his New 64-page Pamphlet, entitled "PAINLESS AND PERFECT DENTISTRY," which contains a List of the Diplomas, Gold and Silver Medals, and other Awards obtained at the Great International Exhibitions, to any part of the world, gratis and post free. *Agents Wanted.*

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**WHOLESALE AND RETAIL DRUGGIST,**  
**PIETERMARITZBURG, NATAL.**  
*London Agents: Messrs. HAWKES, SOMERVILLE & CO.,*  
 1 WHITTINGTON AVENUE, E.C.

**THE PERFECT SURGICAL BANDAGE.**  
 Preferred to all Makes hitherto used.  
 In Cases of Twelve Six-yard Rolls, 2 inches wide, 3s. 9d.; 2½ inches, 4s. 6d.; 3 inches, 5s. 6d.; or, Case containing twelve Six-yard Rolls of each width, 13s.  
*Free by post, to any address in the United Kingdom, for prepaid orders only.*  
 MANUFACTURED BY THE  
 Bole Hall Mill Company, Tamworth, Staffordshire.

**Critchley's Starch Gloss**  
 Prepared only by  
**T. CRITCHLEY,**  
 BLACKBURN, and  
 1 & 2 Australian Avenue,  
 LONDON, E.C.  
 Makes Starched Linen like new. Does not stick to spider-like Materials. Once tried always wanted. Used in the Royal Laundries. Sold everywhere, in Packets, 1d., 3d., 6d., and 1s. each. Write for quotations.

**ASSAY FURNACES, &c.**  
**THE MORGAN CRUCIBLE CO.,**  
*Sole Manufacturers of*  
**MORGAN'S and SALAMANDER CRUCIBLES,**  
**BATTERSEA, LONDON, S.W.**  
 All kinds of Crucibles in Plumbago, Clay, &c., Single and in Nests.  
 Muffles, Portable Assay and Melting Furnaces, &c.  
 Read "Assay Notes" in U. AND D., April 15, 18

**TO LET.**

Medical and Sanitary Exhibition, 1881. **DIABETES** AWARD OF MERIT.  
**VAN ABBOTT'S GLUTEN BREAD,**  
 And all other suitable Foods for Diabetic Patients.  
*Dietary Tables and Price Lists post free on application.*  
**G. VAN ABBOTT & SON, 5 Princes St., CAVENDISH SQ., W.**

**PURE PRECIPITATED CHALK.**  
*Cheapest Sellers in the Market.*  
**Chemicals, Drugs, and Oils at lowest market rates.**  
 APPLY TO  
**AUG. LEVERMORE & CO.,**  
 8 LIME STREET, LONDON, E.C.

**BROMIDIA**  
 (REGISTERED).  
**NEW HYPNOTIC.**  
 One Bottle . . . . 4/6 | One Dozen . . . . 40/  
 One Gross, 10 per cent. discount.  
 FOR SALE BY ALL WHOLESALE AND EXPORT DRUGGISTS.  
**BATTLE & CO., 38 SOUTHAMPTON ROW, LONDON, W.C.**

**PETROLEUM JELLY,**  
 EQUAL TO AND CHEAPER THAN VASELINE.  
**SANITARY FLUID AND SHEEP DIP,**  
 THE CHEAPEST AND BEST DISINFECTANT.  
 GREASE, PITCH, ASPHALTE, AND ALL PRODUCTS OF TAR AND ROSIN.  
*Samples and Prices on application.*  
**GRINDLEY & CO., POPLAR, LONDON, E.**

**TO LET.**


**POWELL & BARSTOW,**  
 5 Albion Place, Blackfriars Bridge. London, S.E.,  
 Late W. HURLSTONE & CO., Blackfriars Road and Vine Street, S.E.,  
 MANUFACTURERS TO THE WHOLESALE TRADE OF  
**ELASTIC GUM SURGICAL INSTRUMENTS.**  
 WORKS, LAMBETH. ESTABLISHED 1830.

**S. SAINSBURY'S**  
 Prepared from the finest  
**ENGLISH LAVENDER,**  
 without any foreign whatever.  
**176 & 177 STRAND, LONDON.**  
*Wholesale and Shipping terms on application.*  
**Water.**

**ORANGE WINE**  
 (VIN. AURANT, P.B.)  
 Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export, as it will keep good in any climate. In casks, 13, 27, 56, 112, 140 gallons; small casks 3s. 9d. per gall., carriage allowed. In wine bottles (not less than 3 doz.), at 9s. per doz., including bottles. Cases extra and returnable.  
*Sample size stamps. Special quotations to large buyers.*  
**GEO. DURRANT & CO., Hertford.**

**"SPÉCIALITÉ" LIME JUICE**  
 (NO MUSTY FLAVOUR).  
*For Sample and Terms*  
**FELTOE & SONS,**  
 ALBEMARLE STREET, LONDON, W.  
*Can be obtained through the Wholesale Houses.*






## GOVERNMENT DISINFECTANT

CARBOLIC POWDER (PINK) in 1 Cwt. 2 Cwt. CASKS 1lb & 1/2 Packages.  
 CARBOLIC POWDER (PINK) in TINS 6 1/2 & 1/4 - CARBOLIC SOAP N° 1 & N° 2  
 CARBOLIC FLUID in 6 1/2 & 1/4 - STOPPED BOTTLES - CARBOLIC & GLYCERINE SOAP in 1/4 lb. TABS

FREE FROM POISON. THE GOVERNMENT SANITARY CO., TO BE HAD FROM ALL WHOLESALE DRUGGISTS.  
 AGREEABLE IN SMELL. LONDON E.



SAVE OVER 30 PER CENT. BY USING  
**PARAFFINUM MOLLE. P.B.**

(REFINED IN VACUO.)  
 A translucent, perfectly neutral, inodorous, tasteless, and soft (not granular) hydro-carbonaceous jelly. Sp. gr. at melting point, 0.868. Soluble in ether. Cannot become rancid or saponified. Prices—Yellow, 7 lbs., 4/; 112 lbs. 50/. White, 5 lbs., 5/; 40 lbs., 35/. Tins free.

**PARAFFINUM DURUM. P.B.**

Answers all Pharmacopœia "characters and tests," 9d. per lb. Sample pound of either by parcels post, 1/. Process supervised by  
**CHARLES SAUNDERS, Analytical and Manufacturing Chemist,**  
 6 Rochester Sq., N.W. Special quotations to Wholesale Houses.

**A. S. LLOYD'S  
 EUXESIS,**

For SHAVING without SOAP, WATER or BRUSH,  
 And in one half the ordinary time.

**AIMEE LLOYD** 3 Spur Street, Leicester  
 Square, LONDON.  
 (Widow of A. S. LLOYD)

## FOUND DEAD

BY SANFORD'S RAT POISON.

"I have found 145 rats killed in my farm buildings by it."—C. Wilson, Offord.

"It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 200 rats from one dressing with it."—C. Cook, Grange Farm, Ellesmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 3s., of Chemists.

SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 24 years. In packets 3d., 6d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. Liberal terms to Chemists. Wholesale of Barclay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).

**OIL PEPPERMINT,  
 SPERMACEI,  
 SARSAPARILLA,**

**SENECA ROOT,  
 SERPENTARIA ROOT,  
 BALSAMS.**

AND OTHER AMERICAN PRODUCTS,

OFFERED BY

**STALLMAN & FULTON,**

IMPORTERS AND EXPORTERS, NEW YORK.

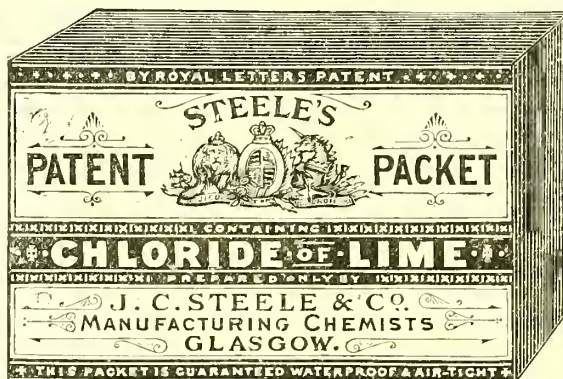
## STEELE'S PATENT PACKETS CONTAINING

# CHLORIDE OF LIME

Packed in  
 uniform-sized Boxes at  
 the following prices:—

12 doz. 1d. size	...	8/-
8 " 1/4-lb. "	...	8/-
4 " 1/2-lb. "	...	7/6
2 " 1-lb. "	...	7/-
Assorted Boxes, containing 8 1-lb., 12 1/2-lb., 16 1/4-lb., 32 1d. size, 7/9.		

Above Prices are subject to usual  
 Wholesale discounts.



Our Packets  
 are air-tight, water-  
 proof, neat, and clean, with full  
 directions for Disinfecting and  
 Bleaching purposes, containing  
 Lime of best quality and full  
 Chlorine strength.

### FOR EXPORT

they are specially suitable, and  
 we can with confidence recom-  
 mend them.

Samples on application.

PREPARED ONLY BY

**JOHN C. STEELE & CO.,**  
**MANUFACTURING CHEMISTS,**  
 Victoria Street, Port Eglinton, 42 CHEAPSIDE, Telegraphic Address—  
**GLASGOW. LONDON. "CHLORIDE GLASGOW."**



# MENTHOL CONES—A1 BRAND.



No. 1.

ORDER AS  
**A1**  
BRAND.

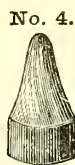
-6 Glass,  
3/6 per doz.



No. 2.

ORDER AS  
**A1**  
BRAND.

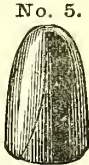
-6 Willow Wood,  
3/6 per doz.



No. 4.

ORDER AS  
**A1**  
BRAND.

1/- Menthol on Wood  
Mount, in Screw-  
capped Glass Bottle,  
6/9 per doz.



No. 5.

ORDER AS  
**A1**  
BRAND.

1/- Bullet Shape  
Cone, in Screw-  
capped Bottle,  
6/9 per doz.



No. 6.

ORDER AS  
**A1**  
BRAND.

1/- Boxwood,  
Pedestal Shape,  
5/- per doz.



No. 7.

ORDER AS  
**A1**  
BRAND.

1/- Boxwood,  
Barrel Shape,  
6/- per doz.



No. 8.

ORDER AS  
**A1**  
BRAND.

1/- Boxwood,  
Acorn Shape,  
6/- per doz.

No. 12.—Polished Sycamore, 3/6 per doz.

No. 15.—6d. Cardboard, pretty, pocketable, saleable, 3/- per doz.

Special Terms to Shippers and Large Buyers.

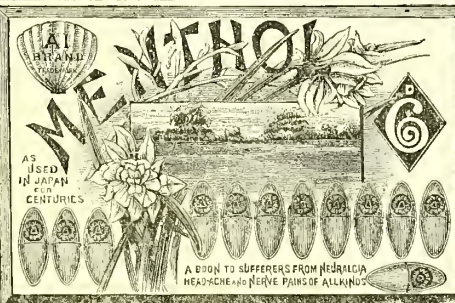
We still continue to give away an empty Show case with 2 doz. 1/ and 1 doz. 6d. sizes, or 5 doz 6d. of our brand. The case is 11 in. long by 5 1/2 in. deep, and the lid lifts so that the goods can be sold from it, making it both a useful and attractive addition to a chemist's counter.

## GUARANTEED PURE JAPAN MENTHOL. NO STAMP REQUIRED.

Nos. 9 &amp; 9a.



1/- & 1/6  
Boxwood,  
Skittle  
Shape,  
6/- and 7/0  
per doz.



No. 19.—Quite new, bound to sell, 6d. Boxwood, egg-shape, arranged on an attractive show-card, in 5 colours with easel back. 3s. per doz. The cheapest shape going.

Nos. 11 &amp; 14.



No. 13.—Vegetable Ivory Acorn or Skittle Shape, each in a separate box, 6/6 per doz.

No. 13a.—Ditto, 12 in a hinged outer, without separate cardboard boxes, 6/3 per doz.

5 per cent. discount for cash with order, if sent direct.

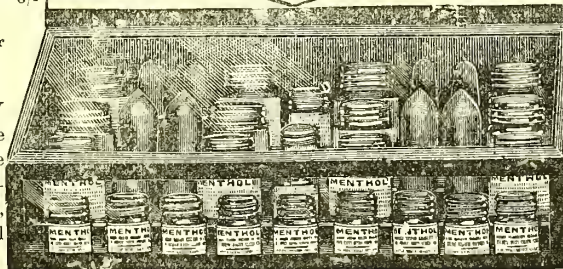
-6 and 1/- Boxwood, Pyramid Shape, each in a separate cardboard box, 4/- and 6/6 per doz.

Ditto, 12 in hinged outer, without separate cardboard boxes, 3/6 and 6/3 per doz.

## QUALITY versus CHEAPNESS.

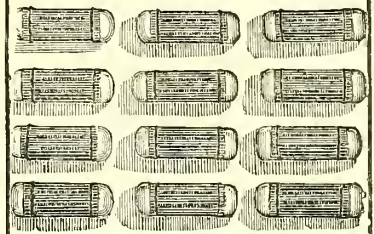
Don't be persuaded to try other Brands for the sake of cheapness. The A1 Brand allows a good margin of profit to both wholesale and retail, and finds favour with the public owing to the Menthol being effective in its use and doing what it pretends to. There is a lot of inferior Menthol in the market, so beware of cheap Brands, which will only tend to ruin the sale of an article which, if supplied pure and really good, must daily increase in demand, and become an important item in a chemist's business.

THE NEW INSTANTANEOUS HEAD-ACHE AND A1 BRAND MENTHOL NEURALGIA! REMEDY FOR IN VARIOUS SHAPES AND SIZES



No. 10.

A1 Brand. MENTHOL A1 Brand. 6<sup>d</sup>. NEURALGIA & HEADACHE 6<sup>d</sup>. PENCIL.



-6, 12 on a card, 3/6 per doz.

The A1 Brand is put up in 19 different forms, at prices to suit all classes of trade. These prices we do not constantly vary, but endeavour to take a fair average of the market price of Menthol, and on that basis to supply at as low a price as possible compatible with a good, reliable, and saleable article.

All shapes and sizes can be procured through any Wholesale House, or direct from

**J. G. SHIRLEY, PROPRIETOR A1 BRAND MENTHOL, 30 PATERNOSTER SQUARE, LONDON, E.C.**

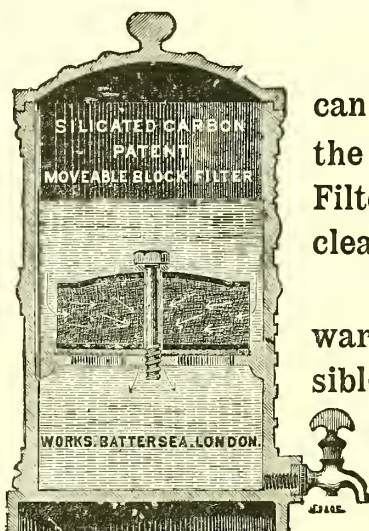
Telegraphic Address—"MENTHOL LONDON."



# SILICATED CARBON

## PATENT MOVABLE BLOCK FILTERS.

LIBERAL DISCOUNT TO THE TRADE.



(Section.)

Domestic Filters (as above), in Cream-coloured Stone-ware, with Plated Taps and Patent Movable Blocks:—

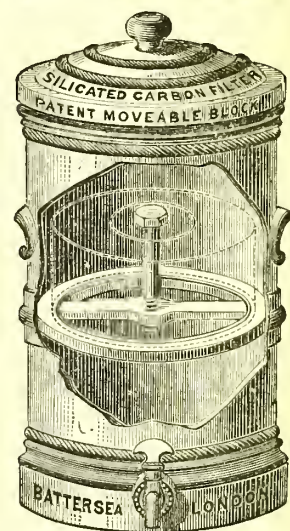
No. 27. O. 1 gal. 10/6 each.	D. 6 gals. 42/- each.
A. 1 „ 14/6 „	E. 8 „ 52/- „
B. 2 „ 21/- „	F. 12 „ 70/- „
C. 4 „ 32/- „	



TAP



No loose Pan or inner vessel to cause breakage.



(Elevation with Block removed.)

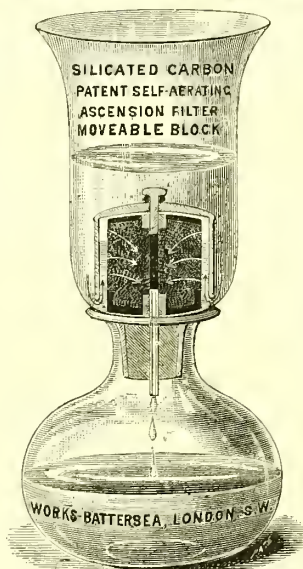
Dining Room Filters, in Marbled China, with Plated Taps and Patent Movable Blocks:—

No. 22. A. 2 gals. 35/- each	
B. 5 „ 80/- „	
Refrigerative Terra Cotta, do. do.:	
No. 25. 2 gals. 31/6 „	

LIBERAL DISCOUNT TO THE TRADE.

## THE NEWEST AND MOST EFFICIENT TABLE FILTER.

The water ascends in the direction indicated by the arrows, and each time the top glass is filled the air under the porcelain cover is forced through the Silicated Carbon Block, which is thus automatically aerated.



By simply removing the glass peg the Silicated Carbon Block is at once released for cleansing or renewal.

The Carbon Blocks are efficiently cleansed by boiling, and extra blocks can be supplied with each Filter when desired.

No. 38.

### PLAIN GLASS.

No. O—1 Pint ... ..	2/6 each.
„ A—2 „ ... ..	4/- „
„ B—3 „ ... ..	5/6 „

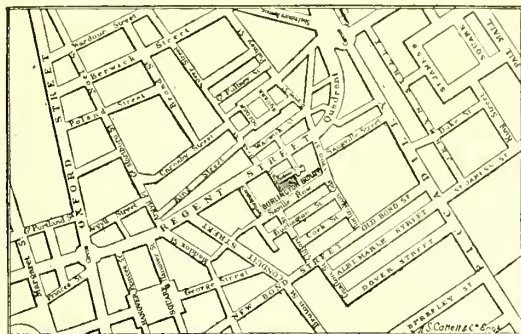
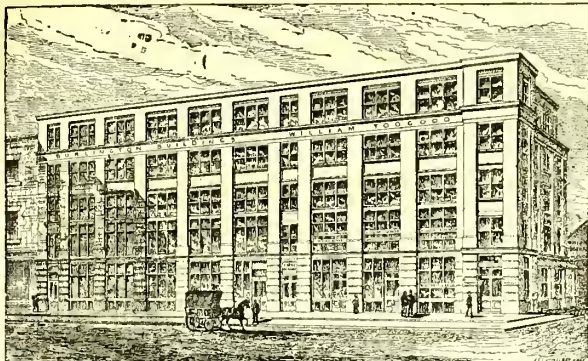
No. 38.

### ENGRAVED GLASS.

No. O—1 Pint ... ..	3/6 each.
„ A—2 „ ... ..	5/6 „
„ B—3 „ ... ..	7/6 „

FOR FULL ILLUSTRATED LISTS WRITE TO THE  
**SILICATED CARBON FILTER COMPANY,**  
 CHURCH ROAD, BATTERSEA, LONDON, S.W.





WILLIAM TOOGOOD'S NEW PREMISES.

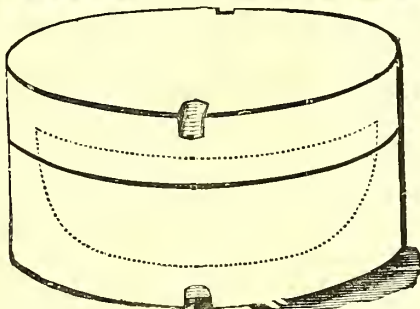
**WILLIAM TOOGOOD,**  
**WHOLESALE AND EXPORT**  
**GLASS BOTTLE MANUFACTURER**  
 AND  
**DRUGGISTS' SUNDRYMAN,**  
 HAS REMOVED FROM  
 35, 36 & 37 MOUNT STREET, GROSVENOR SQUARE, W.,  
 TO  
 BURLINGTON BUILDINGS,  
 BEDDON STREET, REGENT STREET, LONDON, W.

**TOOGOOD'S IMPROVED PATENT**  
**EARTHENWARE COVERED POTS**

*are claimed to be the most perfect and convenient yet offered to the Trade, and possess the following Advantages:—*

1st.—An India-rubber Band passed vertically over the pot is kept in its place by the notches, and effectually secures the lid; for travelling this applies a want greatly needed.

2nd.—The Covers being made quite flat, labels can be affixed with ease, and without creasing.



3rd.—The inside of the Pots being rounded or egg-shape, the contents can be entirely removed without waste.

4th.—Great attention has been paid to insure accuracy of contents.

**PRICES, per gross.**

$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$ oz.
18/-	18/-	18/-	20/-	22/-	24/-
2	3	4	6	8 oz.	
27/-	34/-	42/-	54/-	66/-	

AUSTRALIAN AGENCY AND SAMPLE ROOM:

Mr. A. I. JOSEPH, Bond Street, Sydney.

Telegraphic Address: "TOOGOOD LONDON."

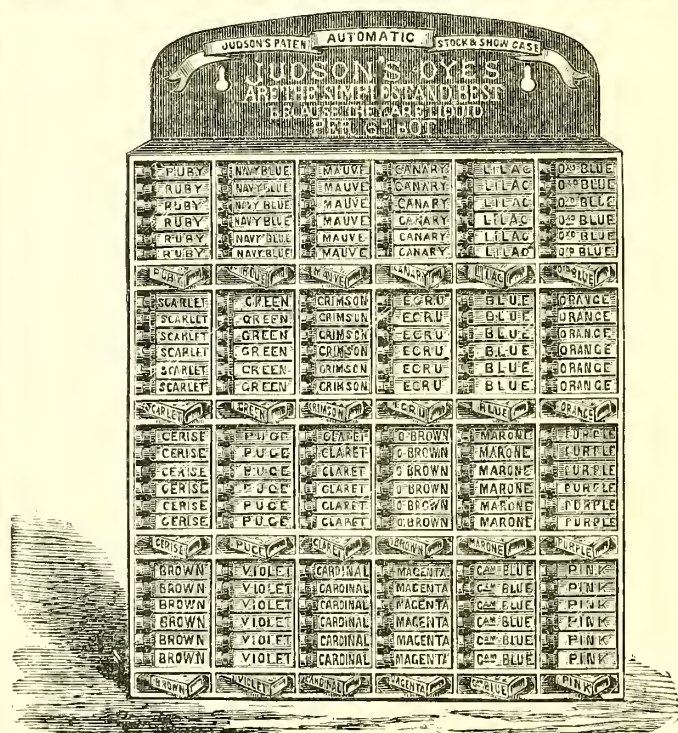
Telephone No. 3834.

*William Toogood's Price Current of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded post free upon application.*

**SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.**



# THE LATEST INVENTION!!!



## THE NEW PATENT SHOW CASE,

SHOWN IN THE ABOVE DRAWING,

Is made to hold 7 Bottles of each of the 24  
Leading Colours of

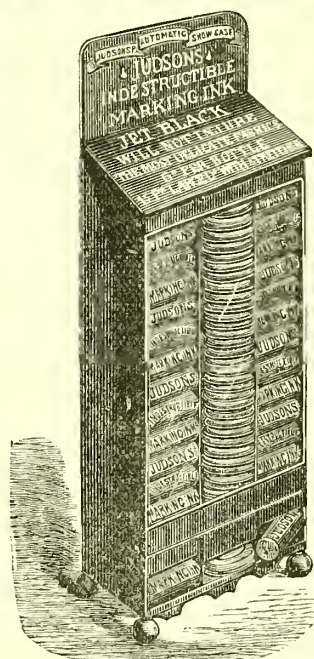
### "JUDSON'S DYES."

CASE WITH CONTENTS COMPLETE,

**48/-** (subject).

This is the most attractive and convenient Show Case ever offered to  
the Trade; may be hung up, or will stand on counter.

The Bottles are so arranged that when one is removed another  
immediately takes its place.



## AUTOMATIC SHOW CASE,

TO CONTAIN

3 dozen 6d. and 3 dozen 1s.

OF

### JUDSON'S "INDESTRUCTIBLE" MARKING INK.

PRICE COMPLETE WITH CONTENTS,

**36/-** (subject).

*To stand on counter, or may be hung on wall.*

Wherever these Cases are shown the sale is very  
large, and this Marking Ink, which is an entirely  
new invention, is the only Marking Ink  
ever invented that is absolutely indelible.

# DANIEL JUDSON & SON, L<sup>IM</sup>.

77 SOUTHWARK STREET, LONDON, S.E.





